

# AREVA et le Pacte Mondial

COMMUNICATION ON PROGRESS 2008







2008 a été pour notre Groupe une nouvelle année de croissance. Mais, pour AREVA, la performance économique ne prend son sens que lorsqu'elle s'inscrit dans une action déterminée en faveur du développement durable.

Dans cet esprit, l'interaction des enjeux sociaux, environnementaux, éthiques, et sociétaux, actuels et à venir, sont partie intégrante de nos réflexions stratégiques. Cette démarche s'appuie sur les principes du Pacte Mondial. L'ensemble des 75 000 collaborateurs du Groupe, présents dans plus de 100 pays, le met en œuvre dans le cadre de notre Charte des Valeurs, aujourd'hui diffusée en quinze langues.

Au-delà, le Pacte Mondial est pour nous une plateforme d'échanges qui nous permet, par la diversité géographique et culturelle de ses membres, et par son réseau, d'approfondir des thèmes qui nous sont chers, tels que les droits de l'Homme ou le changement climatique.

Comme en témoignent notre « Communication on Progress » de cette année et les actions qui y sont décrites, AREVA est résolument engagé dans une stratégie de croissance responsable et de développement durable. La référence aux principes du Pacte Mondial l'inspire, et c'est pourquoi j'ai le plaisir de lui renouveler l'engagement et le soutien du Groupe AREVA.

Anne Lauvergeon  
Présidente du Directoire

# Mise en œuvre des principes du Pacte Mondial

AREVA a adhéré en mars 2003 au Pacte mondial de l'ONU qui rassemble, sur la base de l'engagement volontaire, les entreprises, les organismes des Nations unies, le monde du travail et la société civile autour de dix principes universels relatifs aux droits de l'Homme, aux normes du travail, à l'environnement et à la lutte contre la corruption.

Au-delà de sa participation à des initiatives développées au sein même du Pacte Mondial (le « *Global Compact Human Rights Working group* » et « *Caring for Climate* ») le groupe AREVA est membre actif d'autres organisations ou initiatives de promotion et d'échange d'expérience dans les domaines du Pacte Mondial dont « Entreprises pour les Droits de l'Homme » (en cours de création administrative), la BLIHR, BSR, ou encore le WBCSD.

Les principes du Pacte Mondial sont explicitement repris dans notre charte des valeurs. Adoptée en 2003, elle associe des valeurs, des principes d'action et des règles de conduite.

Elle s'applique à toutes les activités que contrôle le groupe, nucléaires et non nucléaires et dans tous les pays où elles s'exercent. Le management est responsable de sa mise en œuvre à tous les échelons.

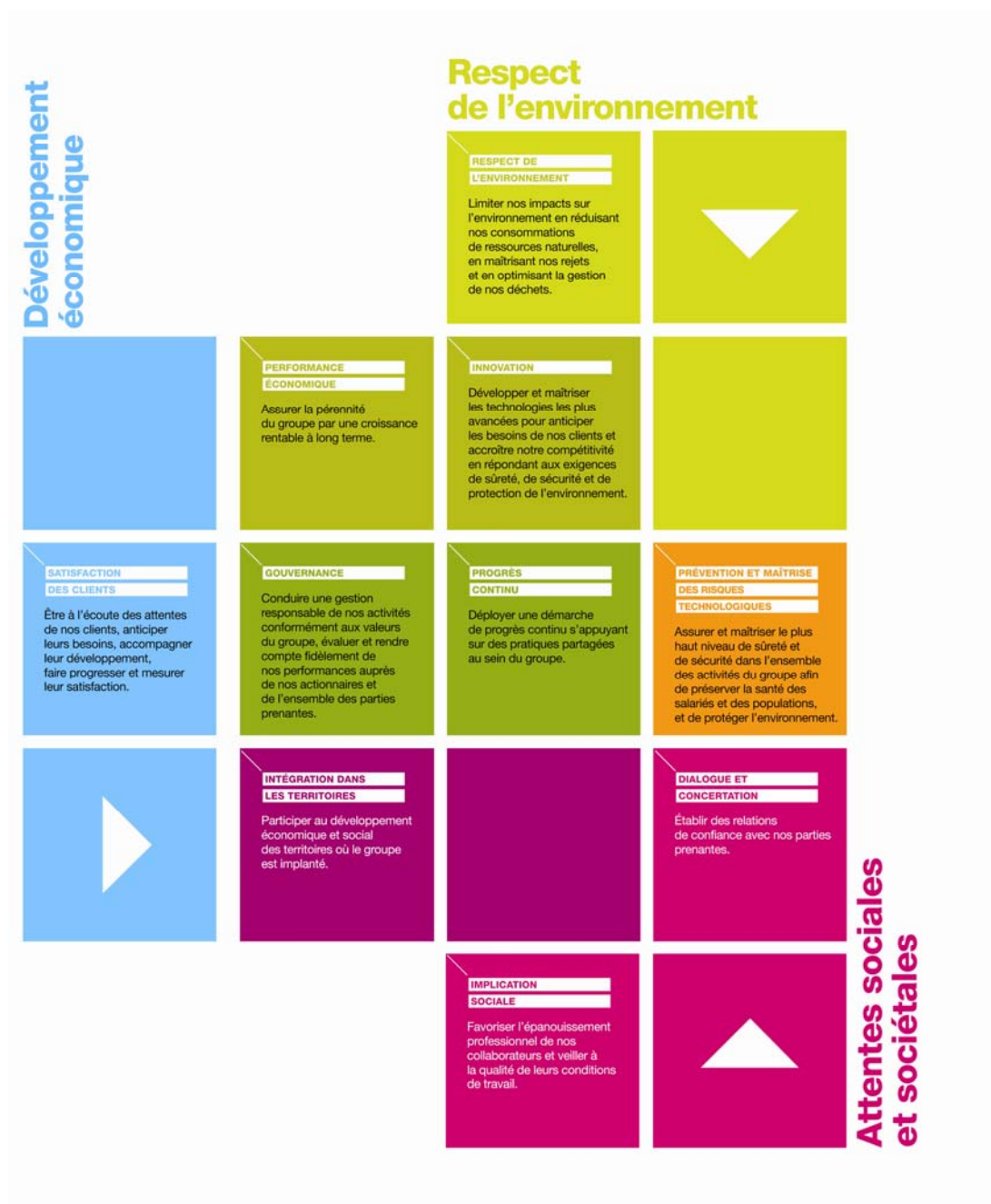
## Nos Valeurs

- Satisfaction du client
- Rentabilité
- Sens des responsabilités
- Sincérité de la communication
- Intégrité
- Conscience professionnelle
- Esprit de partenariat



Consultez le tableau de bord des actions  
de développement durable 2008 en annexe

La Charte des valeurs et notre politique de développement durable déclinée au travers de nos 10 engagements sont des éléments fondateurs dans la conduite de nos opérations. L'ensemble des entités du groupe évaluent leur performance sur ces 10 engagements. Notre processus d'amélioration est basé sur l'analyse de notre performance par rapport à nos objectifs, sur des études de benchmarks et sur l'avis de nos parties prenantes externes que nous sollicitons à échéances régulières.



# Le Pacte Mondial en actions



Le « Rapport de croissance responsable 2008 » du Groupe AREVA , rend compte de nos objectifs et de nos progrès. Les pages suivantes en reprennent certains éléments-clés et soulignent les principales actions de l'exercice 2008 les plus directement liées aux dix principes du Pacte Mondial.

Consultez sur [www.aveva.com](http://www.aveva.com) :

- le Rapport de Croissance responsable
- le Chiffres 2008

## Droits de l'homme

1. Les entreprises sont invitées à promouvoir et à respecter la protection du droit international relatif aux droits de l'Homme dans leur sphère d'influence ; et
2. à veiller à ce que leurs propres compagnies ne se rendent pas complices de violations des droits de l'Homme.

## Actions

### Charte des valeurs

La Charte des Valeurs du Groupe élaborée en 2003 sur la base des principes du Pacte Mondial fait explicitement mention des Droits de l'Homme, et des textes et principes qui régissent ou promeuvent leur application.

Connue de l'ensemble des salariés (traduite et diffusée en treize langues) et portée à la connaissance des parties prenantes, elle décline les valeurs, principes d'action, et règles de conduite, dont l'application et la mise en œuvre relèvent de la responsabilité de tous les dirigeants de toutes les unités et filiales du Groupe et entrent également dans le champ de l'Audit.



Mary Robinson  
Présidente de Realizing Rights

### Promotion externe des Droits de l'homme

AREVA a participé activement au séminaire Responsabilité Sociale des Entreprises et Droits de l'Homme de Rabat (fev.2008) pour la promotion de l'Initiative sur la Transparence des Industries Extractives et d'Entreprises pour les Droits de l'Homme; AREVA a co-organisé, avec la BLIHR (Business Leaders Initiative on Human Rights) et EDH, un séminaire international pluripartite "Entreprises et Droits de l'Homme", au Palais de Chaillot (Paris), à l'occasion du soixantième anniversaire de la Déclaration Universelle des Droits de l'Homme.

### Sensibilisation éthique

Un programme de sensibilisation à l'éthique a été déployé auprès de plus de 400 managers du Groupe. Pour permettre de toucher un plus grand nombre de collaborateurs un programme d'e-learning a été déployé aux Etats-Unis.

# Le Pacte Mondial en actions

## Droit du travail

3. Les entreprises sont invitées à respecter la liberté d'association et à reconnaître le droit de négociation collective à veiller à ;
4. l'élimination de toutes les formes de travail forcé ou obligatoire ; et
5. l'abolition effective du travail des enfants;
6. l'élimination de la discrimination en matière d'emploi et de profession.

## Actions



### ODEO

En 2006, AREVA a signé un accord européen sur l'égalité des chances avec la Fédération de la Métallurgie. Cela constituait la base d'un dispositif innovant de dialogue social qui franchit une nouvelle étape en 2008 avec la création d'ODEO (*Open Dialogue through Equal Opportunity* ou Dialogue ouvert sur l'égalité des chances). ODEO est une initiative conjointe entre le Comité de groupe européen, la Fédération Européenne de la Métallurgie et AREVA, bénéficiant du soutien de la Commission Européenne.

Avec cette initiative, AREVA s'est fixé pour objectif d'obtenir rapidement des résultats concrets dans tous les pays de l'Union européenne sur l'emploi des personnes en situation de handicap et sur l'égalité professionnelle femmes/hommes.

### Charte parentalité

La signature de la Charte de la Parentalité en entreprise en avril s'inscrit dans cette même démarche en faveur de l'égalité des chances : un engagement à favoriser "un environnement de travail où les salariés-parents peuvent mieux concilier leurs vies personnelle et professionnelle". AREVA est également adhérente de l'Observatoire de la Parentalité lancé en novembre 2008 pour promouvoir les meilleures pratiques et encourager la traduction concrète de la charte dans la vie des entreprises.

### Politique senior

L'allongement de la durée de vie active et le flux de salariés expérimentés amenés à quitter AREVA dans les années à venir représentent un double enjeu pour l'entreprise : répondre aux aspirations spécifiques des salariés en fin de carrière et, assurer la transmission d'expertise entre les seniors partants à la retraite et les générations plus jeunes.

Un nouveau programme, initié en mai 2008, instaure deux nouveaux entretiens pour les seniors, respectivement à 10 ans et 2 ans de leur retraite, pour stimuler la gestion de carrière, mieux anticiper son terme, organiser la transmission des compétences.

# Le Pacte Mondial en actions



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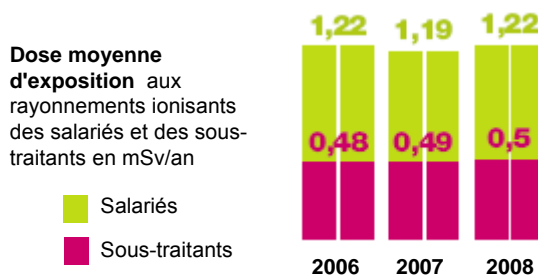
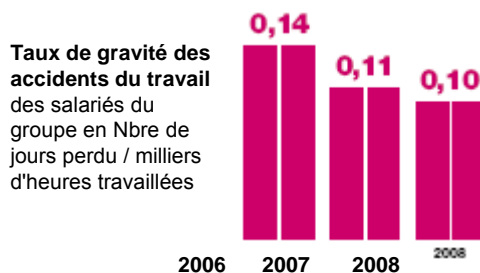
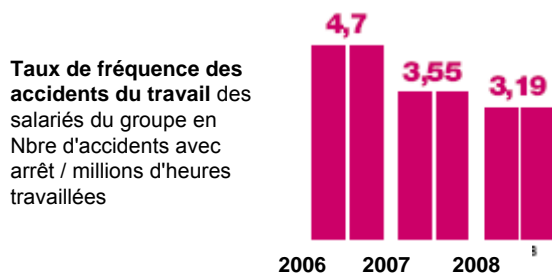
## Actions (suite)

### Relations sociales

De nombreux accords ont été signés en 2008 au sein d'AREVA et de ses filiales. Ils concernent une grande diversité de sujets : la gestion prévisionnelle des métiers, la rémunération, la mobilité, le temps de travail, l'épargne salariale et l'ensemble des problématiques liées à l'égalité des chances.

### Santé et sécurité au travail

Protéger ses salariés et les employés de ses sous-traitants intervenant sur ses sites et sur ses chantiers reste une priorité majeure pour le groupe. La sécurité et la santé faisant partie intégrante des métiers d'AREVA, elle est prise en compte dès la conception des installations, et est assurée tout au long de son exploitation. C'est également un des critères de sélection de ses entreprises sous-traitantes.





# Le Pacte Mondial en actions



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## Actions (suite)

Les actions réalisées dans les domaines de la santé et de la sécurité en 2008 sont :

- ▶ la mise en place opérationnelle au sein de son Université d'une formation destinée à ses ingénieurs sécurité, en complément de celle dispensée à ses directeurs depuis 2006 ;
- ▶ la diffusion d'une directive au niveau mondial destinée à aider le management à mieux maîtriser la sécurité du travail avec ses sous traitants ;
- ▶ la réalisation de réunions d'échanges et de partage d'expérience avec nos clients majeurs concernant la gestion de la sécurité de nos grands chantiers;
- ▶ l'identification exhaustive des produits cancérigènes mutagènes reprotoxiques, et étude de la faisabilité de leur substitution;
- ▶ la prévention des nuisances liées au bruit ;
- ▶ la poursuite de la mise en place des observatoires de la santé autour des sites miniers;
- ▶ la participation aux actions de maintien dans l'emploi et à l'intégration du handicap en impliquant le réseau santé interne ;
- ▶ la mise en place du dispositif de prévention des risques psychosociaux;
- ▶ la poursuite des efforts en matière de radioprotection.



Signature de la charte sécurité commune à l'ensemble des intervenants du chantier GBII

AREVA s'est engagé en 2008 dans une action forte sur les comportements en s'appuyant pour cela sur une démarche "Facteur Organisationnel et Humain" qui est en cours de déploiement avec les fonctions sûreté, environnement, qualité et progrès continu.

# Le Pacte Mondial en actions



## Droit du travail

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## Actions (suite)

### SIDA

En novembre 2008, la Présidente du Directoire d' AREVA a confirmé l'engagement du Groupe en matière de non-discrimination à l'embauche, faisant suite à une campagne de mobilisation lancée par la Coalition Mondiale des Entreprises contre le SIDA, la Tuberculose et le Paludisme (GBC).

### Actions SIDA au Niger

Le 1er décembre 2006, AREVA a signé un accord de partenariat avec le gouvernement du Niger pour la prévention et la prise en charge du SIDA, dans la région d'Agadez. Conçu en étroite collaboration avec les différents partenaires, le programme développé par cet accord s'appuie sur une juste répartition des rôles et responsabilités pour déployer les objectifs suivants en terme :



- ▶ de renforcement des capacités du système public de santé nigérien ;
- ▶ d'impact sanitaire des opérations (prévention, dépistage, prise en charge) ;
- ▶ de mise en place de modes de relations innovants avec les parties prenantes locales.

Ce projet doit permettre deux avancées majeures :

- ▶ L'élargissement de la couverture VIH/SIDA aux communautés environnantes;
- ▶ la mise en place d'une véritable continuité de soins (prévention, dépistage, prise en charge, accompagnement).

Aujourd'hui l'hôpital de District et l'hôpital de COMINAK bénéficient d'équipement pour permettre le dépistage et le suivi des malades et l'ensemble des acteurs sont formés à la prise en charge des malades et à la prévention. Le Centre de Traitement Ambulatoire d'Agadez est opérationnel et reçoit les malades de la région.

**Pour en savoir plus consultez le document  
du [Global Compact Embedding human  
rights in business practice II](#)**

### Action Fondation AREVA

AREVA soutient un programme déployé par le Secours Populaire, dans la banlieue de Johannesburg, dont l'objectif est d'apporter un soutien psychologique aux enfants âgés de 4 à 18 ans à travers la mise en place de groupes d'écriture, de théâtre, de dessin...

Tous les ans les salariés d'AREVA sont sollicités pour participer la campagne de collecte de fonds. Des animations avec des bénévoles Sidaction, des médecins et les équipes médicales du groupe se sont déroulées sur les sites participants.

# Le Pacte Mondial en actions



## Environnement

7. Les entreprises sont invitées à appliquer l'approche de précaution face aux problèmes touchant l'environnement ;
8. à entreprendre des initiatives tendant à promouvoir une plus grande responsabilité en matière d'environnement ; et
9. à favoriser la mise au point et la diffusion de technologies respectueuses de l'environnement.

## Actions

### Politique environnement

La politique environnement d'AREVA a été réactualisée en 2007 et est déployée sur la période 2008-2011. Elle s'applique à l'ensemble des entités du groupe, tant en France qu'à l'étranger et est mise en œuvre en fonction des spécificités locales. La politique environnement est fondée sur six engagements:

#### ► Manager

S'assurer du respect des exigences réglementaires et des standards groupe en procédant à des revues environnementales périodiques et en déployant des Systèmes de Management Environnemental sur l'ensemble des sites.

#### ► Innover

- Intégrer dans la conception des produits, services, procédés et infrastructures, la réduction des impacts sur l'environnement sur l'ensemble du cycle de vie.
- Prévenir les risques.
- Développer et harmoniser la surveillance environnementale et déployer les méthodes d'évaluation pour prévenir les risques environnementaux dans les domaines chimiques, radiologiques et biologiques.

#### ► Prévenir les passifs

Prévenir les passifs en se préoccupant de leur usage futur et de la préservation de la biodiversité.

#### ► Minimiser l'empreinte environnementale

Améliorer, à chiffre d'affaires constant, les performances environnementales en réduisant :

- les prélèvements dans les milieux naturels et les consommations de matières et d'énergies ;
- les impacts des rejets aqueux et atmosphériques ;
- les déchets conventionnels dangereux et non dangereux.

#### ► Mesurer et rendre compte

Étendre la publication des rapports environnementaux à tous les sites à enjeux environnementaux significatifs en vue de favoriser le dialogue avec les parties prenantes.

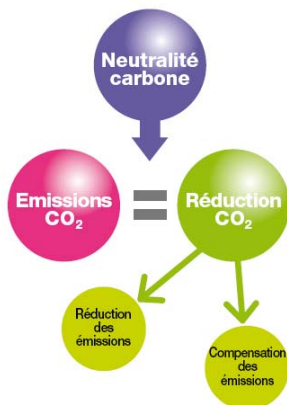
Cette politique est mise en œuvre au travers d'objectifs quantifiés et mise à jour annuellement à partir de la cartographie des risques, des attentes des parties prenantes, des bonnes pratiques internes et externes, du reporting environnemental, d'un benchmark externe et du dialogue avec les entités opérationnelles.

# Le Pacte Mondial en actions

## Environnement

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## Actions



### Gestion du carbone

AREVA est l'un des premiers grands groupes industriels à atteindre un objectif de « neutralité » en carbone pour ses émissions directes de gaz à effet de serre (GES). Le groupe poursuit cette démarche grâce à une stratégie en trois étapes : identification, réduction, puis compensation des émissions de GES. AREVA communique chaque année sur le déploiement de cette stratégie au près du *Carbon Disclosure Project*.

Par ailleurs, AREVA participe activement aux travaux de l'initiative « *Caring for Climate* » du Pacte Mondial.

**Consultez la réponse d'AREVA au CDP 2008 en annexe**

### Produits respectueux de l'environnement

Les préoccupations environnementales sont inscrites dans la mission du groupe : permettre au plus grand nombre d'avoir accès à une énergie toujours plus propre, plus sûre et plus économique. Cela se traduit dans son offre par le développement de solutions de production d'énergie sans CO<sub>2</sub> (produits et services à l'industrie nucléaire et énergies renouvelables) et de technologies pour acheminer efficacement l'énergie ( transmission et distribution ).

# Le Pacte Mondial en actions



## Lutte contre la corruption

10. Les entreprises sont invitées à agir contre la corruption sous toutes ses formes, y compris l'extorsion de fonds et les pots-de-vin.

## Actions

### Charte des valeurs

La charte des valeurs - qui fait explicitement mention des dix principes du Pacte Mondial, décrit les valeurs du Groupe dont celle d'intégrité. L'objectivité et l'intégrité gouvernent les relations des salariés du Groupe avec les services publics, ses clients, ses fournisseurs et ses partenaires. Tout constat de corruption active ou passive, toute sollicitation d'un tiers tendant à une telle corruption, est immédiatement signalée à la hiérarchie qui prend sans délai les mesures propres à en vérifier la réalité, notamment en diligentant les audits appropriés, et à faire cesser sans délai ces agissements s'ils sont avérés.

### EITI

En 2003, AREVA a été l'une des premières multinationales à adhérer à l'EITI (Extractive Industry Transparency Initiative), initiative visant à une plus grande transparence sur les montants versés par les entreprises minières aux États d'implantation. Encouragé par AREVA le gouvernement du Niger s'est engagé à appliquer les principes de EITI depuis mars 2005. Les filiales minières d'AREVA participent depuis 2007 aux comités et sous-comités mis en place. Au Kazakhstan, l'unité opérationnelle locale du groupe est en cours d'accréditation EITI. Le déontologue du groupe AREVA a été coopté à la fin 2007 au Comité de direction international d'EITI.

### Formation Droit de la concurrence

L'Université AREVA avec la Direction Juridique propose une formation au Droit de la concurrence au cours de laquelle sont abordés des cas pratiques de respect de ce droit.

# Achats responsables : une démarche au service des 10 principes du Pacte Mondial

Le point de départ de la démarche d'achats responsables a été la volonté de faire partager les valeurs et engagements du Groupe par nos fournisseurs et partenaires. Des actions systématiques de terrain ont permis la signature, avec une couverture de notre volume d'achats de 80% à fin 2008, de « l'Engagement des Fournisseurs pour le Développement Durable ». La suite logique de cette démarche comprend la mise en place, à partir d'une cartographie fine des fournisseurs, de trois outils complémentaires : des audits fournisseur, la formation des acheteurs et l'accompagnement des fournisseurs.

- ▶ La segmentation et cartographie des fournisseurs, en fonction de leur potentiel et de leur risque, permet de hiérarchiser les actions et de personnaliser les démarches.
- ▶ Un programme annuel d'une trentaine d'audits fournisseurs est en place à l'aide d'un prestataire extérieur. L'établissement du référentiel et le lancement des premiers audits ont été réalisés au cours du deuxième semestre 2008. Si un audit révèle une faiblesse par rapport aux engagements de développement durable, des plans d'actions correctives seront définis et mis en place par le fournisseur en concertation avec AREVA, et un audit de suivi pourra être planifié.
- ▶ Ces audits sont complétés par la mise en place de formations dispensées aux acheteurs d'AREVA qui seront capables d'exercer une veille en se rendant chez les fournisseurs. Ces veilles ont pour objectif d'enrichir la cartographie des fournisseurs, de signaler d'éventuelles bonnes pratiques à promouvoir et, en cas de problème, de déclencher des alertes.
- ▶ Certains fournisseurs pourront faire l'objet d'un accompagnement personnalisé, dans une logique de progrès continu. Cet accompagnement, en contrepartie d'efforts et d'actions de progrès de la part du fournisseur, pourra porter sur un accès à des expertises existantes au sein d'AREVA, une aide au développement sur de nouveaux marchés, ou des actions de sensibilisation et de formation.

# Annexes

- ▶ Tableau de bord de nos actions de développement durable 2008
- ▶ Réponse d'AREVA au questionnaire du Carbon Disclosure Project

# REPORTING ET INDICATEURS

## DÉPLOIEMENT DE NOTRE DÉMARCHE DÉVELOPPEMENT DURABLE

Objectifs	Échéance	Progrès	Résultats 2008	Prochaines étapes
<b>GOUVERNANCE</b>				
Poursuivre le programme d'e-learning à l'éthique et à la conformité. Poursuivre les actions de formation interne.	Récurrent	😊	À la suite du déploiement d'un module d'e-learning aux États-Unis, adaptation d'une version internationale en anglais, dont la diffusion a été amorcée dans plusieurs pays européens. Poursuite, avec l'Université AREVA et le déontologue, du module de deux jours de formation à l'éthique et aux valeurs du groupe pour les dirigeants.	Élaboration de versions locales en chinois et en français du module d'e-learning. Poursuite de la formation à l'éthique et aux valeurs du groupe pour les dirigeants.
Contribuer aux actions d'information et de sensibilisation sur les Droits de l'homme dans l'entreprise, liées plus particulièrement en 2008 au 60 <sup>e</sup> anniversaire de la Déclaration universelle des droits de l'homme (DUDH).	Décembre 2008	😊	Participation active au séminaire Responsabilité Sociale des Entreprises et Droits de l'homme de Rabat (février 2008) pour la promotion de l'Initiative sur la Transparence des Industries Extractives et d'Entreprises pour les Droits de l'homme (EDH, en cours de création). Co-organisation, avec la BLIHR (Business Leaders Initiative on Human Rights) et EDH, d'un séminaire international pluripartite « Entreprises et Droits de l'homme », au Palais de Chaillot (Paris), à l'occasion du 60 <sup>e</sup> anniversaire de la DUDH.	Conception, avec EDH, d'un stage interentreprises de formation aux Droits de l'homme pour le management.
Participer à la définition d'un outil de cartographie des Droits de l'homme en entreprise inspiré de la matrice BLIHR.	2008-2010	😊	Participation, avec la BLIHR, à l'élaboration d'une version électronique d'un outil de cartographie stratégique pour les Droits de l'homme en entreprise.	Validation et test en interne de l'outil de cartographie.
<b>PERFORMANCE ÉCONOMIQUE</b>				
Déployer l'« Engagement développement durable fournisseurs ».	2008	😊	80 % du montant des achats facturés en 2008 l'ont été par des fournisseurs signataires de l'« Engagement développement durable fournisseurs ».	À partir de 2009, la signature de l'« Engagement développement durable fournisseurs » est requise systématiquement pour tout nouveau partenaire commercial.
Mener des audits chez des fournisseurs ciblés, afin de s'assurer du bon respect de l'« Engagement développement durable fournisseurs ».	2008	😊	Conception d'un référentiel d'audit externe développement durable et planification d'un programme d'audit mené par une société tierce. Cinq audits pilotes ont été initiés chez des fournisseurs de cinq pays différents.	20 audits développement durable seront menés en 2009. Des actions d'accompagnement des fournisseurs sont mises en place pour contribuer à corriger les non-conformités détectées lors des audits.
Intégrer le retour d'expérience et l'avis de parties prenantes externes pour poursuivre la démarche « Engagement développement durable fournisseurs ».	Récurrent	😊	Parmi les actions réalisées en 2008, certaines résultent des échanges qui ont eu lieu avec les parties prenantes externes. En complément de la démarche d'audit, un module de formation des acheteurs aux achats responsables d'une demi-journée a été conçu. Il s'adresse à tous les acheteurs du groupe (environ 800), et en particulier aux nouveaux arrivants.	Former 20 % de la population des acheteurs du groupe en 2009. Intégrer le module développement durable dans le parcours de professionnalisation des acheteurs. Fournir aux acheteurs un kit de déploiement du programme développement durable auprès des fournisseurs.
Mettre en place la démarche d'excellence industrielle dans les entités du groupe.	Récurrent	😞	Intensification de la progression des démarches Lean-6 sigma chez AREVA NP et chez AREVA T&D. Lancement d'une démarche excellence opérationnelle dans plusieurs entités d'AREVA NC, avec déploiement des pratiques de supply chain, du Lean et du 6 sigma de façon intégrée. Création des modules de formation associés. Poursuite et intensification des cycles de formation Project Management Initiative AREVA NP pour les managers des grands projets. Création des formations <i>Advanced Contract Management</i> et <i>Advanced Risk Management</i> . Collecte des REX des actions Design To Cost (DTC) engagées dans toutes les filiales d'AREVA et lancement de la construction d'un standard « AREVA DTC ».	Augmenter la synergie entre les filiales. Tendre vers un standard AREVA en matière d'excellence opérationnelle. Étendre la formation à tous les secteurs d'ingénierie du groupe AREVA. Définir le standard « AREVA DTC » avec l'organisation support nécessaire.

😊 Les objectifs ou échéances intermédiaires sont tenus. 😞 Les actions sont en cours mais les objectifs prévus ne sont pas encore atteints. 🚫 Les échéances ne sont pas tenues.



# REPORTING ET INDICATEURS

## DÉPLOIEMENT DE NOTRE DÉMARCHE DÉVELOPPEMENT DURABLE

Objectifs	Échéance	Progrès	Résultats 2008	Prochaines étapes
<b>PERFORMANCE ÉCONOMIQUE</b>				
Réaliser un chiffre d'affaires supérieur à 20 milliards d'euros.	2012	😊	Croissance du carnet de commandes de 21,1 % et du chiffre d'affaires de 10,4 % (vs 2007). Depuis 2004, le carnet de commandes a été multiplié par 2,5 et le chiffre d'affaires a progressé de 34 %.	Pour l'exercice 2009, AREVA anticipe une croissance de son carnet de commandes, de son chiffre d'affaires ainsi que la progression de son résultat opérationnel.
Réaliser une marge opérationnelle à deux chiffres.	2012	😊	Résultat opérationnel, avant complément de provision sur OL3, à 1 166 millions d'euros, soit une marge opérationnelle de 8,9 %. Y compris complément de provision sur le chantier finlandais OL3, le résultat opérationnel s'élève à 417 millions d'euros, soit un taux de marge à 3,2 %.	Le groupe a engagé un programme d'investissements ambitieux de 2,7 milliards d'euros soutenu par les pouvoirs publics. Son financement sera assuré, entre autres, par la cession d'actifs non stratégiques et l'ouverture minoritaire du capital de certains actifs.
Atteindre un niveau de cash-flow opérationnel libre largement positif.	2012	😊	Le cash-flow opérationnel avant investissements s'élève à 943 millions d'euros. AREVA poursuit son programme d'investissements nécessaire au développement de ses positions stratégiques. Le groupe a investi 1 454 millions d'euros (nets de cessions) en 2008. Après investissements nets, le cash-flow opérationnel ressort à - 921 millions d'euros.	Le groupe a engagé un programme de réduction des coûts - achats et frais généraux - de 600 millions d'euros ainsi qu'un programme de réduction de 300 millions d'euros du besoin en fonds de roulement.
<b>SATISFACTION DES CLIENTS</b>				
Suivre la mise en œuvre des actions de progrès définies à la suite de l'enquête satisfaction clients 2005.	Récurrent	😊	Les plans d'actions issus de l'enquête de satisfaction 2005 ont été suivis. En particulier, les 19 grands projets lancés à la suite de l'enquête ont été menés à bien.	
Renouveler le processus d'écoute clients et réaffirmer l'orientation clients. Étendre le périmètre de l'enquête satisfaction clients en multipliant le nombre d'interviewés.	Récurrent	😊	Une enquête de satisfaction clients a été menée en 2008 sur l'ensemble du périmètre nucléaire du groupe : 1000 entretiens au total dont 250 en face-à-face, 750 questionnaires en ligne. 200 actions identifiées dont 45 % sur le processus d'offre et la négociation, 25 % sur la relation client, 25 % sur les produits et services et 15 % sur la gestion de projet. L'enquête a permis de définir trois objectifs de progrès : mettre en valeur nos offres innovantes adaptées aux attentes de nos clients dans les propositions commerciales, maintenir notre capacité à fournir à la fois de la performance et de la croissance, continuer à progresser dans les domaines à très forte valeur ajoutée.	Renouveler le processus d'écoute clients et préparer une nouvelle enquête pour l'ensemble du groupe. Piloter l'avancement des plans d'actions. Rechercher et optimiser les points de convergence entre AREVA et ses clients sur le développement durable.
Définir et mettre en œuvre le plan d'actions résultant de l'enquête clients du pôle T&D d'AREVA.	Récurrent	😊	29 plans d'actions, 550 actions. 103 actions décrites et suivies dans l'application informatique I-Nexus.	

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# REPORTING ET INDICATEURS

## DÉPLOIEMENT DE NOTRE DÉMARCHE DÉVELOPPEMENT DURABLE

Objectifs	Échéance	Progrès	Résultats 2008	Prochaines étapes
<b>IMPLICATION SOCIALE</b>				
Obtenir la certification OHSAS 18001 pour tous les sites à enjeux sécurité significatifs à la fin 2008.	2008	☹️	87 sites certifiés OHSAS 18001 sur 120 sites à enjeux sécurité significatifs.	Obtenir la certification OHSAS 18001 pour toute nouvelle entité à enjeux sécurité significatifs entrant dans le groupe, dans un délai de trois ans.
Atteindre, pour les accidents du travail, un taux de fréquence moyen < 3 et un taux de gravité < 0,15 en anticipant de dix-huit mois l'horizon 2010 préalablement annoncé.	Juin 2009	😊	TF = 3,19 ; TG = 0,10.	Préparer en 2009 une nouvelle politique santé-sécurité AREVA.
Confirmer notre capacité à limiter la dosimétrie individuelle du personnel à 20 mSv sur douze mois consécutifs.	Récurrent	☹️	Moins de 17 % des salariés du groupe et 8 % des salariés des entreprises sous-traitantes ont reçu des doses individuelles supérieures à 2 mSv. 12 salariés intervenant sur des sites clients américains ont reçu une dose individuelle supérieure à 20 mSv. La dose individuelle maximale a atteint 24,4 mSv.	Renforcer nos pratiques en liaison avec nos clients électriciens de façon à atteindre l'objectif de façon pérenne.
Animer la politique santé établie en 2007.	Récurrent	😊	Création de la Direction médicale avec constitution d'une équipe de trois médecins. Lancement de la démarche de limitation des risques psychosociaux.	Préparer en 2009 une nouvelle politique santé-sécurité AREVA.
Poursuivre le recrutement, l'intégration et le développement des collaborateurs dans un contexte de croissance et de renouvellement démographique.	2008	😊	<b>Actions écoles :</b> 100 ambassadeurs écoles en France, 200 dans le monde. 150 actions ont été menées par les ambassadeurs. <b>Carrière seniors :</b> 100 référents formés, 50 contrats de mission signés. <b>Intégration des nouveaux embauchés :</b> processus défini et communiqué pour l'ensemble du groupe. Des outils de communication associés mis à disposition. En France, quatre séminaires d'intégration menés en 2008 (800 personnes intégrées).	Communiquer sur les actions locales mises en œuvre. Étendre la pratique à l'international. Poursuivre le déploiement de la politique Seniors en France et préparer son déploiement en Allemagne. Mettre en place le cycle de professionnalisation des nouveaux embauchés (1 400 personnes en 2009) sur le campus d'Aix-en-Provence (France).
Faciliter l'insertion et le maintien dans l'emploi des personnes handicapées.	2008	😊	<b>Éléments positifs périmètre France :</b> Contrats : 86 en 2008, > 50 % conclus en CDI. Courant d'affaires avec les entreprises du secteur protégé : 3,8 millions d'euros. Semaine nationale pour l'emploi des personnes handicapées : 24 événements emploi et 130 actions locales. Partenariat pour les Jeux paralympiques de Pékin, du 6 au 17 septembre 2008. <b>Éléments positifs périmètre Europe :</b> Projet Open Dialogue through Equal Opportunities (ODEO) : 80 participants Ressources humaines/Managers et représentants du personnel au séminaire européen. 10 plans d'actions régionaux européens définis.	Développer un réseau local d'équipes pluridisciplinaires en impliquant le réseau santé.  Mettre en œuvre les plans d'actions ODEO.
Étendre l'enquête EOS 2008 à tous les salariés dans le monde.	2008	😊	67 000 salariés dans 100 pays ont été invités à participer à l'EOS, 50 000 salariés ont répondu au questionnaire qui était construit autour des dix engagements développement durable d'AREVA.	Communiquer les résultats. Impliquer chacune des BU et des fonctions support dans l'analyse des résultats de l'enquête et dans la définition et la mise en œuvre des actions d'amélioration.

😊 Les objectifs ou échéances intermédiaires sont tenus. ☹️ Les actions sont en cours mais les objectifs prévus ne sont pas encore atteints. 🚫 Les échéances ne sont pas tenues.

# REPORTING ET INDICATEURS

## DÉPLOIEMENT DE NOTRE DÉMARCHÉ DÉVELOPPEMENT DURABLE

Objectifs	Échéance	Progrès	Résultats 2008	Prochaines étapes
<b>PRÉVENTION ET MAÎTRISE DES RISQUES TECHNOLOGIQUES</b>				
Déployer des indicateurs complémentaires de performance sûreté testés en 2007.	2008	😊	Sur la base du retour d'expérience de 2007, le protocole de reporting a été mis à jour pour intégrer les indicateurs supplémentaires dans le reporting effectué par les entités nucléaires en 2008.	Analyser les résultats obtenus pour l'ensemble des entités afin de pérenniser et, le cas échéant, ajuster les indicateurs retenus.
Déployer la démarche « facteur organisationnel et humain » (FOH) pour l'ensemble du groupe.	Récurrent	😊	Formalisation, diffusion, explication des engagements du groupe en termes FOH. Recrutement d'un spécialiste FOH pour animer la démarche au niveau groupe. Organisation d'une convention sûreté et sécurité centrée sur les FOH, premier partage d'expériences de grande ampleur. Nomination de coordonnateurs FOH sur 17 business units (sur un total de 19).	Poursuivre l'amélioration de la prise en compte systématique des FOH dans toutes les activités du groupe.
Déployer la formation aux analyses d'événements en intégrant l'étude du facteur humain.	2008	😊	La formation est opérationnelle, plusieurs sessions se tiennent régulièrement chaque année.	Étendre la formation hors de France.
Réaliser ou réactualiser sur l'ensemble des sites à enjeux environnementaux significatifs (EES) une analyse des risques accidentels.	2011	😊	40 % des sites EES ont actualisé cette analyse.	Poursuivre le déploiement pluriannuel.
Réaliser ou réactualiser sur l'ensemble des sites à enjeux environnementaux significatifs (EES) les études des risques sanitaires.	2011	😊	À fin septembre 2008 : 61 % d'ERS actualisées sur AREVA NC ; 30 % d'ERS actualisées sur AREVA NP ; 12 % d'ERS actualisées sur AREVA T&D.	Poursuivre le déploiement pluriannuel.
Disposer, sur l'ensemble des sites EES, d'un diagnostic actualisé de l'état des sols.	2011	😞	Cette démarche a été enclenchée en 2007 et s'est activement poursuivie en 2008.	Mettre en place en cas de besoin un plan de gestion durable des passifs environnementaux.
<b>RESPECT DE L'ENVIRONNEMENT</b>				
Poursuivre le déploiement de la politique environnement 2008-2011.	Récurrent	😊	Trois sessions de formation ont eu lieu : deux en France et une en Inde. À fin 2008, plus de 120 personnes ont été formées.	Sensibiliser les sous-traitants et fournisseurs dans le domaine environnemental.
Assurer pour les sites EES le maintien de la certification ISO 14001.	Récurrent	😊	Tous les sites ont maintenu leur certification.	Obtenir la certification ISO 14001 pour tous nouveaux sites EES dans un délai de trois ans au maximum suivant leur acquisition.
Réaliser 80 revues environnementales.	2008	😊	90 revues ont été réalisées.	Réaliser une centaine de revues environnementales thématiques en 2009.
Sur la base de la cartographie de la sensibilité des sites, approfondir le volet biodiversité des études d'impact (impact sur les écosystèmes faune et flore).	Récurrent	😊	Deux études ont été réalisées : la mise à jour de l'étude « AREVA et la biodiversité » et l'étude « Identification des zones protégées proches de nos sites d'implantation français ».	Réaliser un kit de déploiement pédagogique (présentation, outil d'évaluation...)

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# REPORTING ET INDICATEURS

## DÉPLOIEMENT DE NOTRE DÉMARCHE DÉVELOPPEMENT DURABLE

Objectifs	Échéance	Progrès	Résultats 2008	Prochaines étapes
<b>RESPECT DE L'ENVIRONNEMENT</b>				
Poursuivre la réduction des émissions de GES notamment SF <sub>6</sub> , N <sub>2</sub> O et CO <sub>2</sub> , en cohérence avec l'engagement de neutralité carbone du groupe.	2011	😊	22,4 % de réduction des émissions directes de GES par rapport à 2007. Signature du contrat de compensation carbone avec ECOACT. En 2008, 100 % des émissions directes ont été compensées.	Mettre en place un procédé permettant d'éliminer les émissions de N <sub>2</sub> O sur le site de Comurhex Malvési. Réduire de 50 % les émissions directes de GES d'ici à 2011, vs 2004 à activité constante. Poursuivre le travail d'inventaire des émissions indirectes.
Améliorer l'écocoefficacité du groupe afin de réduire l'empreinte environnementale, en concentrant les efforts sur les contributeurs majeurs.	2011	😊	Évolution des consommations à CA constant (2008 vs 2004) : - 23 % pour l'énergie ; - 50 % pour l'eau ; + 71 % pour le taux de valorisation des déchets.	Poursuivre le déploiement pluriannuel, conformément à la politique environnement 2008-2011.
Structurer un plan type de gestion des passifs environnementaux.	2008	😞	Rédaction d'une procédure et d'un guide méthodologique.	Diffuser et mettre en œuvre la procédure et le guide en 2009.
Fixer des objectifs de progrès pour la gestion des déchets radioactifs.	Récurrent	😞	Engagement de programmes de reprise et de conditionnement de déchets anciens, planification de la gestion des déchets de démantèlement.	Poursuivre la démarche de gestion exhaustive des déchets historiques et des matières en attente de filière, afin de disposer des éléments nécessaires pour préciser les objectifs de progrès.
<b>INNOVATION</b>				
Approfondir la stratégie dans le domaine des énergies renouvelables.	Récurrent	😊	Le portefeuille de technologies renouvelables a été défini : centrales biomasse, pile à combustible, éolien offshore.	S'appuyer sur les compétences et les synergies techniques d'AREVA pour améliorer la performance des technologies.
Développer les pratiques d'écoconception pour les généraliser à l'ensemble des nouveaux produits.	Récurrent	😞	Développement des réacteurs (ATMEA 1, KERENA, RNR...) intégrant les aspects environnementaux, sociaux et sociétaux. AREVA T&D : - plus de 60 personnes ont été formées à l'écoconception, 40 en Inde (Kalkota et Naini) et 25 en Grande-Bretagne (Stafford) ; - des critères précis et mesurables de certification de produits écoconçus ont été définis et validés ; - les produits sont complètement écoconçus, y compris les postes relais automation et les produits haute tension.	
Élaborer un plan d'écoconception du combustible nucléaire à partir de l'analyse du cycle de vie et des projets de R&D.	2010	😞	La BU Combustible a publié son manuel de management intégré – Qualité, Sécurité, Environnement – sur l'ensemble du secteur (conception et fabrication) et les trois régions France, Allemagne et États-Unis.	Mettre en place progressivement des processus et des procédures d'ici à fin 2010.
Poursuivre nos actions d'innovation, en prenant en compte les attentes des clients et en développant particulièrement les partenariats, l'écoconception, la préparation de l'avenir moyen et long terme, les technologies de l'information et de la communication.	Récurrent	😊	Plusieurs experts de haut niveau provenant des domaines de l'aéronautique, des nanotechnologies et des mathématiques appliquées sont venus renforcer les compétences du groupe.	Mettre à disposition ces experts au service des projets clés.

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# REPORTING ET INDICATEURS

## DÉPLOIEMENT DE NOTRE DÉMARCHE DÉVELOPPEMENT DURABLE

Objectifs	Échéance	Progrès	Résultats 2008	Prochaines étapes
<b>INTÉGRATION DANS LES TERRITOIRES</b>				
Soutenir, via AREVADELFI, une dizaine de projets de développement de grande ampleur en termes d'emploi.	Récurrent	😊	15 projets ont été approuvés par le Comité d'engagement. Ils représentent 542 emplois directs à trois ans, deux de ces dossiers concernent des entrepreneurs handicapés. Au Gabon, quatre projets ont été formalisés (BTP, maraîchage). Au Niger, le partenariat avec SINERGI, société de capital-risque créée avec des partenaires français et locaux, a été étendu en 2008. Un partenariat avec le Crédit Mutuel du Niger a été mis en place pour des opérations de microcrédit.	Identifier et soutenir une quinzaine de projets (y compris Bure et les projets « handicap »). Prodiguer une assistance active à la BU Mines en Afrique.
Accompagner le développement économique des départements abritant le centre de stockage de Bure (France).	Récurrent	😊	Pour la zone de Bure, cinq projets ont été validés avec la création potentielle de 298 emplois.	
Poursuivre les actions de mécénat de solidarité en y impliquant plus largement les salariés.	Récurrent	😊	Collecte de dons pour le Sidaction (10 000 euros) et animations sur site + collecte sur site en France pour l'opération Père Noël Vert du Secours populaire. Don de 350 000 euros à la Croix-Rouge suite au séisme dans la province du Sichuan en Chine. Soutien de 20 salariés d'AREVA dans leur action de bénévolat de compétence (congés solidaires).	Poursuivre les actions de sensibilisation pour l'interne : Sidaction et Secours populaire. Réaliser des panneaux présentant les différentes missions de solidarité. Mettre en avant la rubrique « Impliquez-vous » proposant des offres de bénévolat aux salariés français.
Faire connaître au public les actions de la Fondation.	Récurrent	😊	Publication d'un carnet de voyage électronique des missions des collaborateurs bénévoles. Publication d'une brochure de présentation de la Fondation. Animation de la rubrique intranet. Conférence de presse pour la signature du partenariat avec l'Institut Pasteur de Shanghai.	Poursuivre les actions de communication : réalisation de films sur les activités de la Fondation et mise en ligne régulière (tous les mois) sur intranet et sur internet, communiqués de presse.
<b>DIALOGUE ET CONCERTATION</b>				
Actualiser les cartographies de parties prenantes locales réalisées il y a au moins trois ans.	Récurrent	😊	Neuf exercices de cartographies ont été finalisés en 2008, portant le total du nombre de cartographies à 33 depuis le lancement du programme.	Réaliser dix cartographies en 2009.
Poursuivre la mise en œuvre des « plans d'actions dialogue » au niveau des sites et suivre leur avancement.	Récurrent	😞	64 % des sites ayant fait une cartographie (entre 2004 et 2008) ont élaboré un plan d'actions.	Poursuivre la mise en œuvre.
Réaliser une 3 <sup>e</sup> Stakeholders Session avec nos parties prenantes.	2008	😊	3 <sup>e</sup> Stakeholders Session organisée avec nos parties prenantes en octobre 2008.	Concevoir et organiser une session de concertation spécifique aux États-Unis.
Déployer des observatoires de la santé auprès des principaux sites miniers, en priorité au Niger et au Gabon avant la fin 2008.		😞	Au Gabon : mise en place effective d'un suivi médical postprofessionnel début 2009. Au Niger : le suivi médical postprofessionnel des anciens mineurs interviendra en 2009, et une étude à caractère plus large sur la période 1970-2005 sera initiée.	Mettre en place un suivi postprofessionnel des anciens mineurs au Niger et au Gabon. Étudier la faisabilité d'extension des observatoires de la santé au Canada et au Kazakhstan.

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# REPORTING ET INDICATEURS

## DÉPLOIEMENT DE NOTRE DÉMARCHE DÉVELOPPEMENT DURABLE

Objectifs	Échéance	Progrès	Résultats 2008	Prochaines étapes
<b>PROGRÈS CONTINU</b>				
Poursuivre le déploiement des autoévaluations AREVA Way sur l'ensemble de nos sites.	Récurrent	😊	L'ensemble des BU AREVA ont réalisé une autoévaluation. Réalisation d'un premier exercice d'autoévaluation au sein de la BU Énergies renouvelables.	Réaliser une autoévaluation dans tous les sites de la BU Énergies renouvelables.
Auditer le processus d'autoévaluation et rendre les résultats contrôlables.	2008	😞	Le processus a été audité par la direction de l'audit AREVA. Les évaluations croisées ont permis de contrôler la validité des autoévaluations de certains sites et de recommander des améliorations.	
Adapter la politique de progrès continu à la dynamique de croissance industrielle d'AREVA.	Récurrent	😞	L'adaptation de la politique de progrès continu AREVA est en cours de préparation.	Mettre en œuvre la politique en 2010.
Mettre en place un dispositif de « peer review » facilitant l'échange d'expérience entre managers opérationnels sur le déploiement d'AREVA Way.	Récurrent	😞	Action non engagée car non adaptée, dispositif en cours d'étude.	Mettre en place des échanges de pratiques de progrès continu entre managers opérationnels.
Professionaliser le réseau de progrès continu.	Récurrent	😊	Neuf sessions de formation dispensées dans le cadre de l'Université AREVA.	Poursuivre et adapter des profils de compétences à la dynamique de croissance industrielle du groupe.
Diffuser les méthodologies de progrès continu.	Récurrent	😊	Plus de 100 projets ont été réalisés en utilisant les méthodes 6 sigma, Lean.	Intensifier l'usage de ces méthodes (Lean manufacturing, 6 sigma...).
Développer la mise en place de systèmes de management certifiés et intégrés (environnement, qualité, sécurité au travail).	Récurrent	😊	Croissance de 77 % du nombre d'entités tricertifiées.	
Mettre en œuvre et déployer un processus d'échange des bonnes pratiques entre tous les sites du groupe. Identifier 100 nouvelles Bonnes Idées et Pratiques (BIP) en 2008.	Récurrent	😞	100 <sup>e</sup> BIP diffusée en septembre 2008.	Atteindre 200 BIP diffusées à fin 2009.

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## CDP 2009 Information Request

Respondent: Areva CI

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### General introduction

All over the world, AREVA provides its customers with solutions for carbon-free power generation and electricity transmission. With its knowledge and expertise in these fields, the group has a leading role to play in meeting the world's energy needs.

Ranked first in the global nuclear power industry, AREVA's unique integrated offering covers every stage of the fuel cycle, reactor design and construction, and related services.

In addition, the group is developing a portfolio of operations in renewable energies. AREVA is also a world leader in electricity transmission and distribution and offers its customers a complete range of solutions for greater grid stability and energy efficiency.

Sustainable development is a core component of the group's industrial strategy. Its 75,000 employees work every day to make AREVA a responsible industrial player that is helping to supply ever cleaner, safer and more economical energy to the greatest number of people.

### Risk and Opportunities

#### 1. Regulatory Risks: (CDP6 1(a)(i))

1.1 Is your company exposed to regulatory risks related to climate change?

We consider our company to be exposed to regulatory risks.

Yes, although not in a significant manner at the present moment, given the nature and the size of our industrial facilities and their emissions. Activities related to the nuclear fuel cycle emit very few GHGs and the full life cycle emissions associated to nuclear electricity are very low.

AREVA complies with the rules and regulations where and when they exist, and we follow very actively the development of the international negotiations on climate change, and their potential impacts for both ourselves and our customers, internationally as well as nationally.

AREVA's European industrial facilities are subject directly to the EU Emissions Trading Scheme (ETS). In the 1st trading period AREVA was subject to the ETS for 2 sites (combustion units in France) the emissions of which never exceeded the allocated certificates. In the 2nd trading period that started in January 2008, AREVA is subject to the EU ETS for one site only: AREVA NC La Hague. We anticipate that the package of EU climate and energy measures approved in December 2008 will form the basis of the 3rd trading period.

The new regulatory measures that could impact AREVA business are the following:

- For our customers (electricity utilities): power plants: emissions to be cut to 21% below 2005 levels by 2020 by granting fewer emission allowances under the EU Emissions Trading System (ETS). This could lead to increasing the share of nuclear power in the European mix and be an opportunity for AREVA

- For our own factories, the modifications of the scope of the EU directive (inclusion of major chemical installations and additional gases such as N<sub>2</sub>O for the emissions trading period after 2012, exclusion of the combustion plants of less than 35 MW) could modify the present perimeter of our factories impacted by the EU ETS.

- The integration of other GHGs in the European trading scheme (SF<sub>6</sub>, N<sub>2</sub>O) has been anticipated as we currently implement an emissions reduction plan for these gases too. It is worth noting that we already have a project to reduce our N<sub>2</sub>O emissions in one of our major facilities.

In case of an international agreement at the end of 2009 (Copenhagen), the reduction objective of the EU package on climate and energy would become 30% and could impact AREVA for our factories affected by the EU ETS (actual and future: see above with N<sub>2</sub>O).

Such new international agreement could also impact AREVA worldwide as we have manufacturing facilities in 43 countries and emissions in those countries of different GHG, in particular CO<sub>2</sub>, N<sub>2</sub>O and SF<sub>6</sub>.

The different units of the AREVA Group are perform risk analysis including regulatory risks and constantly improve those studies, reviewing the hypothesis to take into account any new risk. The regulatory constraints associated with climate change are analyzed by a group of experts (Environment department, Renewable Business Unit, Sustainable Development department, Finance department). We also seek to collaborate constructively and at an early stage with decision makers on these issues.

### Further information

#### 2. Physical Risks: (CDP6 1(a)(ii))

2.1 Is your company exposed to physical risks from climate change?

We consider our company to be exposed to physical risks.

Yes, as all industrial activities can be.

The basic principles applied to assess our exposure to physical risks resulting from climate change are directly derived from the safety and security analysis that our industry systematically performs and improves. The assumptions are permanently reviewed to take into account any new physical risk or event.

In accordance with applicable standards and regulations, the nuclear and high risk facilities (SEVESO plants) of the group are designed to withstand a very large range of adverse circumstances, including extreme weather events. The risk is taken into consideration in the design of the facilities based on local conditions with significant margins. Those safety analysis are periodically reviewed to take into consideration changes in regulation and hypothesis used in the design and in particular on extreme weather events.

For other facilities, regarding the risk of flood and because of the location and kinetic phenomena, large sites (according to their vulnerability) already have a warning system and procedures in place. For other weather events like strong winds and extreme precipitations, thorough analysis are still in progress, and will be fed into the design and or operating parameters of our installations.

For the better assessment and integration of extreme weather conditions, we have called upon third party expertise to validate the potential issues and our responses

and priorities in the light of the climate change expected by the end of the century.

We also use our insurers and re-insurers worldwide to benefit from their watch on the climate risks related (zoning, dedicated Geospatial Systems).

The subject that may affect our business in the very short term is the drought and the resulting shortage in water supply. It was decided to expand at European level the perimeter of the observatory set up since 3 years in France. The scope of the observatory covers France and data is available from the French Environment Ministry. It provides AREVA with its needed vigilance information via the internet.

On the topic of water resources, eco-efficiency actions (cooling loops) and reduction of releases as low as reasonably achievable are the preferred solutions preferred solutions and have been the subject of a particular attention in recent years. For example, certain sites of our Zirconium activity have planned investments in cooling loops, other sites like Comurhex Malvesi or our mines have invested in cooling towers to reduce their water consumption in areas where water is in short supply. Water management is also a permanent and top priority for our development projects in the front-end activities of the fuel cycle (mining in particular).

The different units of the AREVA Group are perform risk analysis and constantly improve those studies, reviewing the hypothesis to take into account any new risk. To this end, the group has drawn up a business risk model (BRM) to be used by its business units. Working from a defined number of typical risks or families of risk (BRM risk), the model indexes all of the foreseeable or unexpected situations or events that could have an impact on employee safety, on the environment, on the financial performance of the business unit, of the subsidiary or even of the group, and on its corporate reputation. The BRM is enhanced based on best practices and lessons learned. Using the BRM as a starting point, each business unit establishes an operational risk map that graphically illustrates the seriousness of its risks and its degree of management at any given period. The risk map defines criteria for implementing appropriate action plans

Further information

### 3. Other Risks: (CDP6 1(a)(iii))

3.1 Is your company exposed to other risks as a result of climate change?

We consider our company to be exposed to other risks.

Potentially yes.

Climate change is one of the biodiversity erosion mechanisms: it has an impact on the distribution, migration or survival of species (fauna and flora), particularly the difficulties of adaptation to high temperature and desynchronization of the food chain caused by the early seasons.

Biodiversity protection is one of the challenges for the AREVA group, in particular in our mining sites. We have to be able to differentiate the impacts of our activities (monitoring of the evolution of ecosystems impacted) and the impact of climate change on biodiversity.

Of a different nature, and potentially very important to us, is the vulnerability of local communities to the impacts of climate change. A significant part of our workforce, as well as sub-contractors, originate from these communities. We therefore need to understand and anticipate the possible impacts and remedies to ensure a stable continuation of our activities.

Further information

### 4. Regulatory Opportunities: (CDP6 1(b)(i))

4.1 Do regulatory requirements on climate change present opportunities for your company?

Regulatory requirements present opportunities for my company.

Today's or anticipated regulatory requirements regarding climate change can provide business opportunities for AREVA.

For instance, the regulatory requirements associated with carbon emissions lead to establishing a visible and possibly long term cost for CO2 emissions. This enhances the competitiveness of the CO2-free solutions that we are offering our customers: nuclear power plants, biomass plants, wind energy.

AREVA already offers its customers a large number of innovative products and technologies for climate protection and for energy and resource efficiency that help meet regulatory requirements. Examples of these include:

A/ The offer of our expertise and skills throughout the uranium cycle to make nuclear energy available to all countries that have developed the relevant capabilities. The group is the world leader in providing products and services for nuclear power generation and the only company to cover all industrial activities in this field.

B/ Our Renewable Energies Business Unit (offer of decentralized energy supply - wind power and bioenergies - and hydrogen energy) complements the group's core mission: enabling everyone to have access to ever cleaner, safer and more economical energy.

Bioenergy has great potential. US Federal and state environmental agencies consider biopower carbon neutral, a significant advantage over traditional power facilities. ADAGE - a newly created JV between Duke Energy and AREVA - is well positioned to win a significant portion of the rapidly expanding U.S. biomass market as biomass provides an alternative base load power source for states concerned with CO2 emissions. The environmental commitments outlined in the ADAGE strategic plan were featured at the Clinton Global Initiative 2008 Annual Meeting in New York.

Moreover, projects implemented through our Renewable Energies Business can generate marketable carbon credits such as CERs and VERs.

C/ Offering solutions for reducing SF6 emissions: AREVA Transmission and Distribution (AREVA T&D) has worked to develop a patented special profile for the gaskets with three seals. High tightness and low leakage rates are achieved thanks to a huge inner sealing surface. This surface is broader than an ordinary O-ring, for instance, therefore the SF6 losses of the flange are minimized. This improvement represents an attractive design for our customers.

European Regulation 842/2006 dealing with certain fluorine-based greenhouse gases specifies rules for the confinement and recovery of SF6. The regulation's goal is to avoid any release of SF6 into the atmosphere by fixing rules such as the identification of the presence and quantity of SF6 incorporated in high voltage switchgear, and the recovery and/or transportation characteristics of the SF6 in any container. The regulation also stipulates the obligation to recover the SF6 during all maintenance operations or on disassembly of a device with the aim of recycling it, regenerating it or incinerating it.

D/ AREVA's offer to analyse the electrical installation of our customers (industries or utilities) and to propose and supply the most adapted compensation solution (air



core reactors and capacitors designed and manufactured in our units) to reduce electricity consumption and GHG emissions.

E/ The AREVA T&D division helps its customers improve their grid operations while reducing CO2 emissions, 25% of which come from electricity generation. There are four major areas of improvement:

- Demand-side management (DSM) programs that encourage consumers to modify their level and pattern of electricity usage
- Low CO2-emission energy sources
- Improved network efficiency
- Reduced emissions from grid equipment

As an example, the Nordic Operations and Information System (NOIS) combines all these areas. NOIS, an energy management system designed by T&D and implemented in Northern Europe, interconnects hydro, wind and solar plants, helping users optimize generation resources. Utilities access production and supply data in real time, then send the right amount of power from the right source to the right customer at the right price.

Another way AREVA tries to cut CO2 is by boosting transmission efficiency by reducing losses. Most power networks supply alternating current (AC), but AC transmission entails major losses. New AREVA technologies enable efficient trading and transmission via High Voltage Direct Current (HVDC) networks, which immediately reduces losses. HVDC technology is the only way to connect different AC frequencies or voltages together; for example across regional or country boundaries. As such, it is the most efficient way to transmit large quantities of electricity over long distances. As a result, HVDC is in high demand to link AC networks to low-emission power sources, such as offshore wind parks.

There is no doubt that the Kyoto Protocol, the EU package on climate and energy and the political initiatives on renewable and low carbon energies multiplying in Europe, North America as well as in emerging countries such as China, India and Brazil are all catalysers for creating business opportunities for our Group.

Further information

## 5. Physical Opportunities: (CDP6 1(b)(ii))

5.1 Do physical changes resulting from climate change present opportunities for your company?

Physical changes present opportunities for my company.

In addition to possible impacts to our own industrial operations we seek to monitor very accurately the issues that our customers (mostly electricity utilities) can or could face as a result of climate change.

Climate change impacts that have already occurred offer AREVA new market opportunities. AREVA is developing and selling products and technologies that help mitigate and adapt to climate change and therefore have sales potential partly connected with changes in climate conditions.

We seek to provide our customers with reliable and advanced products and technologies, as well as with related expert services, to help them find the appropriate solutions to the physical risks that they incur or anticipate.

Such products, technologies, and expert services cover the following areas :

- nuclear power stations and the associated fuel cycle supplies
- high power wind turbines
- turnkey biomass and biogas power plants and small hydroelectric plants.
- the transmission and distribution grids and associated equipment

Further information

## 6. Other Opportunities: (CDP6 1(b)(iii))

6.1 Does climate change present other opportunities for your company?

Climate change presents other opportunities for my company.

We believe that market opportunities will grow as new energy systems as well as new strategies and behaviours emerge as a response to climate change.

For instance in the field of nuclear energy, climate change is a driver to do more than just maintaining the present fleet of about 360 GWe. A nuclear renaissance is occurring all over the world. As a result, the size of the market is expanding.

The development of our commercial positions can be achieved by strengthening our lead over competitors in terms of innovation. Our approach gives priority to the continuous improvement of existing products and services through contact with our customers while investing in future technologies. Our objective is to strengthen our position as number 1 in nuclear energy and number 3 in the transmission and distribution of electricity worldwide.

Clearly, nuclear energy will be at the forefront of these new means of electricity production thanks to 3rd generation, EPR power plants, but also via 4th generation fuel reactor systems which we are developing with our partners.

The stakes in the field of renewable energy strengthen AREVA's strategic positioning on the CO2-free energy market, bringing complementary solutions to nuclear technologies. Renewable Energies Business Unit was created in November 2006 and has a strong involvement in wind energy, biomass and hydrogen energy. This sector offers very strong growth prospects.

>> Wind power

At the end of 2007, offshore wind energy contributed some 1100 MW in Europe. By the end of 2010, installed capacity should come to 3 to 4 GW. With annual growth of 1 to 3 GW, wind energy should represent 10 to 15 GW in 2015. In Germany, regulatory conditions are favorable to the development of offshore wind farms. Close to 20 projects representing 6 GW of capacity have been authorized. Great Britain is also a very promising market, with 8 GW expected by the end of 2014.

Our strategy: to develop rapidly Multibrud to become a key player in the offshore wind expected to yield very strong growth. We are developing high power turbines that convert the wind's motive power into electricity. In October 2007, we acquired a 51% stake in Multibrud, a German manufacturer of offshore wind turbines. The company's scope covers:

- Development of wind technology
- Design and manufacture of 5 MW offshore M5000 wind turbine
- Design, testing, assembly and maintenance services.

The M5000 turbine offers a leading-edge technology with a light-weight hybrid drive-train solution, suited for all foundation types (such as tripod anchorage). Thanks to their enclosed, wear-resistant construction, the M5000s are particularly designed for use in the harsh conditions of the sea. Little maintenance and high technical availability are guaranteed by the optimum protection against corrosive sea air, the remarkably low tower-head weight of 310t, and the minimum-wear design of components.

Multibrind offers marketing and industrial synergies with AREVA's transmission and distribution division, a leading supplier of equipment for connecting wind turbines to the grid.

>> Bioenergies

A report by the International Energy Agency, "Energy Technology Perspectives: Scenarios and Strategies to 2050", forecasts that world electricity production from biomass will rise from 1.3% in 2003 to 5% in 2050. Most of this growth will occur in high potential emerging countries such as India, China and Brazil. Our goal: ultimately, 60% of the sales revenue from the bioenergy business will come from non-European countries.

We supply turnkey biomass and biogas power plants that convert organic materials of plant and animal origin into energy. In January 2008, we acquired 70% of Koblitz, a Brazilian firm that supplies power plants fuelled with sugarcane bagasse and small hydroelectric plants. We have 100 power plants in operation or under construction worldwide in Europe, Asia and South America representing more than 2,500 MW of installed capacity.

AREVA and Duke Energy created ADAGE™ in 2008, an innovative joint venture dedicated to the development of green biopower energy solutions for U.S. electricity customers.

ADAGE will facilitate the development of biopower plants that will use wood waste to produce electricity. According to the agreement, AREVA will design and build biomass power plants. Duke Energy Generation Services (DEGS), a commercial power business unit of Duke Energy that owns and develops renewable energy, will manage operations. For each project, ADAGE also will negotiate power purchase agreements and fuel contracts, and secure suitable sites. Hence, ADAGE will provide customers a fully integrated solution.

The U.S. Energy Information Administration estimates the total installed capacity of wood biomass power generation is 6,000 megawatts. EIA and several energy consulting firms predict that this figure may double over the next 10 years.

>> Hydrogen energy

Through our subsidiary Helion, we offer solutions for producing hydrogen by water electrolysis and for generating electricity with fuel cells. The fuel cell combines hydrogen and oxygen via a membrane, simultaneously creating water, heat and electricity. Reverse process is used in electrolysis.

Nuclear energy and renewable energies are complementary in a CO2-free energy mix. Such an energy mix combines cost-competitive centralized base load power backed by 40 years of experience with recent energies whose large-scale development will help make them competitive.

In the T&D business the optimization of interconnections and grid management is also an opportunity.

Further information

## Greenhouse Gas (GHG) Emissions Accounting, Emissions Intensity, Energy and Trading

### 7. Reporting Year (CDP6 Q2(a)(ii))

Information about how to respond to this section may be found in "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)" developed by the World Resources Institute and the World Business Council for Sustainable Development ("the GHG Protocol"), see <http://www.ghgprotocol.org/>. ISO 14064-1 is compatible with the GHG Protocol as are a number of regional/national programme protocols. For more information see <http://www.ghgprotocol.org/> and use the guidance button above.

Please provide CDP with responses to questions 7, 8, 9, 10.1, 10.2, 11.1 and 11.2 for the three years prior to the current reporting year if you have not done so before or if this is the first time you have answered a CDP information request. Please work backwards from the current reporting year, so that you enter data for your oldest reporting period last.

Questions 10.1, 10.2, 11.1, and 11.2 are on subsequent webpages and the dates that you give in answer to question 7 will be carried forwards to automatically populate those webpages.

7.1. Please state the start date and end date of the year for which you are reporting GHG emissions.

Start date: 01 January 2008

End date: 31 December 2008

Financial accounting year: 01 January 2008

### 8. Reporting Boundary: (CDP6 Q2(a)(i))

8.1. Please indicate the category that describes the company, entities, or group for which Scope 1 and Scope 2 GHG emissions are reported.

Companies over which financial control is exercised – per consolidated audited Financial Statements.

8.2. Please state whether any parts of your business or sources of GHG emissions are excluded from your reporting boundary.

All parts of our business/sources of GHG emissions are accounted for the scopes 1 and 2 of the ISO 14064-1, including the transportation (within SCOPE 1 emissions such as short and long term vehicle rentals)

Concerning the scope 3, the indirect emissions linked to

- Business travel (air travel only)
  - Dedicated employee transportation (bus services, short commuting flights within the mine)
  - Transportation of all nuclear materials (class 7)
- are also reported since 2008.

We are still working on the emissions linked to transportations of goods (non nuclear) to get a complete reporting of our emissions (Transportation of goods: manufactured or semi-finished products, raw materials, waste, products, equipment, inputs (deliveries) and outputs (dispatches) at an AREVA site, all transportation excluding documents.). A first counting has been done in 2008 for 2007 emissions. Our reporting protocol has been modified to allow the monitoring of those emissions.

#### 9. Methodology: (CDP6 Q2(a)(iii))

9.1. Please describe the process used by your company to calculate Scope 1 and Scope 2 GHG emissions including the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 GHG emissions.

Please provide your answer in the text box. In addition to this description, if relevant, select a methodology from the list of published methodologies. This will aid automated analysis of the data.

AREVA methodology is consistent with the standard ISO 14064-1 for the following of its scope 1 and 2 emissions

AREVA is monitoring its direct greenhouse gas emissions (GHGs) for the entire AREVA group: emissions from gases of anthropogenic origin responsible for the increase in the greenhouse effect, namely CO<sub>2</sub> (carbon dioxide), CH<sub>4</sub> (methane), N<sub>2</sub>O (nitrous oxide) and halogenous compounds (CFC, HCFC, HFC, PFC and SF<sub>6</sub>).

Direct GHG emissions may result from:

- Fossil fuels burned by operating companies in power plants, in order to produce energy or utilities,
- Fossil fuels burned by operating machinery with thermal engines used on group sites,
- Various carbonaceous materials burned by operating companies in incinerators, in order to dispose of hazardous and non-hazardous industrial waste,
- Production processes, in particular those that use carbon, nitrogen or fluorochemical compounds,
- Leakage of halogen compounds used as insulation in the process of manufacturing electrical equipment,
- Leakage of coolant, refrigerant and fire-retardant fluids used on industrial sites,
- Solvents used to treat surfaces.

For sites concerned, direct GHG emissions appearing in the National Allowance Plan & Allowance (from EU ETS) are the emissions coming from all sources related to activities from the installation to which quotas are affected. Those emissions are declared and checked by an approved organization, then validated by the Authority. GHG emissions that fall under the European Emissions Trading Scheme are reported in accordance with the European Monitoring and Reporting guidelines.

Total GHG emissions is the sum of Indirect GHG emissions( emissions due to electricity and thermal energy imported and purchased for site operation) and Direct GHG emissions (see definition above).

The methodology for determining emissions is consistent with the GHG Protocol: we report our GHG emissions according to the requirements of the internal reporting protocol. This protocol defines the reporting principles, methods for determining emissions, parameters requiring reporting, emission sources, conversion factors, GWPs and more. Process-related emissions are to be determined via three methods: i) based on measurements using standardized or accepted methods, ii) based on calculations using nationally or internationally agreed estimation methods and emissions factors

The calculation of direct CO<sub>2</sub> emissions by fuel combustion in company-owned central power plants and boilers is based on fuel consumption.

Indirect CO<sub>2</sub> emissions from import and export of electricity are to be calculated using calculation schemes of the GHG protocol. Our internal reporting protocol is revised and updated on a yearly basis.

Select methodologies:

ISO 14064-1

Please also provide:

#### 9.2 Details of any assumptions made.

Concerning Scope 1 emissions, with regard to GHG emissions from fuel consumption, only direct GHG emissions generated by operating equipment used onsite are included in the reporting scope. The emissions for vehicles circulating offsite (e.g. company cars and commercial vehicles), as well as service vehicles circulating onsite and/or offsite (e.g. on construction sites) are not included in the scope of this indicator.

Indirect CO<sub>2</sub> emissions from import of energy are to be calculated using calculation schemes of the GHG protocol.

#### 9.3 The names of and links to any calculation tools used.

- List of GWPs by type of gas: reference IPCC 2007 Fourth Assessment Report, 2007, Global Warming
- Emission Factor due to electricity purchased per country in g CO<sub>2</sub>/kWh: Source: International Energy Agency Data Services, 2005 : CO<sub>2</sub> emissions from fuel combustion (2005 Edition); Table: Electricity Emission Factors, All Fuels
- Source: OMINEA (Oranization and methods for national inventory of atmospheric emissions in France ) national inventory report 3rd edition - February 2006 (CITEPA)

• Carbon Assessment, Emissions factors guide V 5.0 , January 2007

• GHG transport module by ADEME/EpE

Select calculation tools:

9.4 The global warming potentials you have applied and their origin.

See [Attachement AREVA indicator definition scope 1&2](#)

9.5 The emission factors you have applied and their origin.

See [Attachement AREVA indicator definition scope 1&2](#)

Further information

[http://cdp.cdproject.net/attachedfiles/Responses/53247/10345/AREVA-GHG-Scope\\_1-2-Measuring-Protocole.pdf](http://cdp.cdproject.net/attachedfiles/Responses/53247/10345/AREVA-GHG-Scope_1-2-Measuring-Protocole.pdf)

### 10. Scope 1 Direct GHG Emissions: (CDP6 Q2(b)(i))

Instructions for question 10 and question 11 (following page)

When providing answers to questions 10 and 11, please do not deduct offset credits, Renewable Energy Certificates etc, or net off any estimated avoided emissions from the export of renewable energy, carbon sequestration (including enhanced oil recovery) or from the use of goods and services. Opportunities to provide details of activities that reduce or avoid emissions are provided elsewhere in the information request.

Carbon dioxide emissions from biologically sequestered carbon e.g. carbon dioxide from burning biomass/biofuels should be reported separately from emissions Scopes 1, 2 and 3. If relevant, please report these emissions in question 15. However, please do include any nitrous oxide or methane emissions from biomass/biofuel combustion in your emissions under the three scopes.

Please answer the following questions using Table 1.

Please provide:

10.1. Total gross global Scope 1 GHG emissions in metric tonnes of CO<sub>2</sub>-e

Please break down your total gross global Scope 1 emissions by:

10.2. Country or region

Please provide CDP with responses to questions 10.1 and 10.2 for the three years prior to the current reporting year if you have not done so before or if this is the first time you have answered a CDP information request. Please work backwards from the current reporting year, so that you enter data for your oldest reporting period last. Table 1 (below) and table 5 (Q11.1 and 11.2) will be automatically populated with the dates that you give in answer to 7.1.

Electric utilities should report emissions by country/region using the table in question EU3.

Table 1 - Please use whole numbers only. Use the "Other" option in the drop down menu to enter the name of a region.

<b>Reporting year Q7.1 Start date</b>	01/01/2008
<b>Reporting year Q7.1 End date</b>	31/12/2008
<b>10.1 Total gross global Scope 1 GHG emissions in metric tonnes CO<sub>2</sub>-e</b>	771648
<b>10.2 Gross Scope 1 emissions in metric tonnes CO<sub>2</sub>-e by country or region</b>	
Europe	536536
Asia	40171
South americas	2793
North americas	66626
Africa	125521

Your answer to question 10.1 will be automatically carried forward to tables 2 and 3 below if you add a country or region in answer to 10.2 or press "Save" at the end of the page.

Please tick the box if your total gross global Scope 1 figure (Q10.1) includes emissions that you have transferred outside your reporting boundary (as given in answer to 8.1). Please report these transfers under 13.5.

Where it will facilitate a better understanding of your business, please also break down your total global Scope 1 emissions by:

- 10.3. Business division
- and/or
- 10.4. Facility

10.3. Business division (only data for the current reporting year requested)

Table 2 - Please use whole numbers only.

Business Divisions - Enter names below	Scope 1 Metric tonnes CO2-e
<b>Total gross global Scope 1 GHG emissions in metric tonnes CO<sub>2</sub>-e - answer to question Q10.1</b>	<b>771648</b>
Corporate	7716
Transmission & distribution	239211
Back end	92598
Reactor & services	54015
Front end	378108

10.4. Facility (only data for the current reporting year requested)

Table 3 - Please use whole numbers only.

Facilities - Enter names below	Scope 1 Metric tonnes CO2-e
<b>Total gross global Scope 1 GHG emissions in metric tonnes CO<sub>2</sub>-e - answer to question Q10.1</b>	<b>771648</b>

10.5. Please break down your total global Scope 1 GHG emissions in metric tonnes of the gas and metric tonnes of CO<sub>2</sub>-e by GHG type. (Only data for the current reporting year requested.)

Table 4 - Please use whole numbers only.

Scope 1 GHG Type	Unit	Quantity
CO <sub>2</sub>	Metric tonnes	370993
CH4	Metric tonnes	
CH4	Metric tonnes CO <sub>2</sub> -e	
N2O	Metric tonnes	
N2O	Metric tonnes CO <sub>2</sub> -e	172808
HFCs	Metric tonnes	
HFCs	Metric tonnes CO <sub>2</sub> -e	
PFCs	Metric tonnes	
PFCs	Metric tonnes CO <sub>2</sub> -e	
SF6	Metric tonnes	
SF6	Metric tonnes CO <sub>2</sub> -e	206757

10.6. If you have not provided any information about Scope 1 emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 1 GHG emissions information in future.

Further information

For question 10. 5  
 We have an other section called Others that cover mainly HFC,PFCs...  
 They represent 21 089 t CO2 e

11. Scope 2 Indirect GHG Emissions: (CDP6 Q2(b)(i))

Important note about emission factors where zero or low carbon electricity is purchased:

The emissions factor you should use for calculating Scope 2 emissions depends upon whether the electricity you purchase is counted in calculating the grid average emissions factor or not – see below. You can find this out from your supplier.

Electricity that IS counted in calculating the grid average emissions factor:

Where electricity is sourced from the grid and that electricity has been counted in calculating the grid average emissions factor, Scope 2 emissions must be calculated using the grid average emissions factor, even if your company purchases electricity under a zero or low carbon electricity tariff.

Electricity that is NOT counted in calculating the grid average emissions factor:

Where zero or low carbon electricity is sourced from the grid or otherwise transmitted to the company and that electricity is not counted in calculating the grid average, the emissions factor specific to that method of generation can be used, provided that any certificates quantifying GHG-related environmental benefits claimed for the electricity are not sold or passed on separately from the electricity purchased.

[Click here](#) to see the instructions from the previous page on answering question 11.

Please answer the following questions using Table 5.

Please provide:

11.1. Total gross global Scope 2 GHG emissions in metric tonnes of CO<sub>2</sub>-e.

Please break down your total gross global Scope 2 emissions by:

11.2. Country or region

Please provide CDP with responses to questions 11.1 and 11.2 for the three years prior to the current reporting year if you have not done so before or if this is the first time you have answered a CDP information request. Please work backwards from the current reporting year, so that you enter data for your oldest reporting period last. Table 5 will be automatically populated with the dates that you gave in answer to 7.1.

Table 5 - Please use whole numbers only. Use the "Other" option in the drop down menu to enter the name of a region.

Reporting year Q7.1 Start date	01/01/2008
Reporting year Q7.1 End date	31/12/2008
11.1 Total gross global Scope 2 GHG emissions in metric tonnes CO <sub>2</sub> -e	356627
<b>11.2 Gross Scope 2 emissions in metric tonnes CO<sub>2</sub>-e by country or region</b>	
Europe	185713
Asia	54410
South americas	1482
North americas	56575
Africa	58447

Your answer to 11.1 will be automatically carried forward to tables 6 and 7 below if you add a country or region in answer to 11.2 or press "Save" at the end of the page.

Where it will facilitate a better understanding of your business, please also break down your total global Scope 2 emissions by:

11.3. Business division

and/or

11.4. Facility

11.3. Business division (only data for the current reporting year requested)

Table 6 - Please use whole numbers only.

Business Divisions - Enter names below	Scope 2 Metric tonnes CO <sub>2</sub> -e
<b>Total gross global Scope 2 GHG emissions in metric tonnes CO<sub>2</sub>-e - answer to question Q11.1</b>	<b>356627</b>
Corporate	7132
Transmission & Distribution	82024
Back end	49928
Reactor & services	42795
Front end	174747

11.4. Facility (only data for the current reporting year requested)

Table 7 - Please use whole numbers only.

Facilities - Enter names below	Scope 2 Metric tonnes CO <sub>2</sub> -e
<b>Total gross global Scope 2 GHG emissions in metric tonnes CO<sub>2</sub>-e - answer to question Q11.1</b>	<b>356627</b>

11.5. If you have not provided any information about Scope 2 emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 2 GHG emissions information in future.

Further information

## 12. Contractual Arrangements Supporting Particular Types of Electricity Generation: (CDP6 Q2(b)(i)- Guidance)

12.1. If you consider that the grid average factor used to report Scope 2 emissions in question 11 does not reflect the contractual arrangements you have with electricity suppliers, (for example, because you purchase electricity using a zero or low carbon electricity tariff), you may calculate and report a contractual Scope 2 figure in response to this question, showing the origin of the alternative emission factor and information about the tariff.

Indirect GHG emissions are assessed from the electrical and thermal energy purchased or imported by the sites; they are calculated as follows:

Indirect GHG emissions =  $\sum EF_{elec} * 10^{-3} * \text{electricity consumption} + \sum EF_{th} * \text{thermal energies consumed}$

where

Indirect GHG emissions (in tCO<sub>2</sub>e): GHG emissions due to electrical energy purchased and/or imported and to thermal energy purchased and/or imported for group site

EF<sub>elec</sub> (in gCO<sub>2</sub>/kWh): CO<sub>2</sub> emission factor for electricity production. This factor depends on the type of energy used for electricity below). The EF must be multiplied by 10<sup>-3</sup> to obtain the result in tCO<sub>2</sub>.

Electricity consumed (in MWh): electricity consumed per country.

EF<sub>th</sub> (in tCO<sub>2</sub>/MWh): CO<sub>2</sub> emission factor for thermal energy. This factor depends on the type of energy used for thermal energy production and therefore differs according to the producer

Thermal energy consumed (in MWh): thermal energy consumed by the site.

12.2. If you retire any certificates (eg: Renewable Energy Certificates) associated with zero or low carbon electricity, please provide details.

We do not retire any certificates associated with zero or low carbon electricity.

Further information

## 13. Scope 3 Other Indirect GHG Emissions: (CDP6 Q2(c))

For each of the following categories, please:

- Describe the main sources of emissions,
- Report emissions in metric tonnes of CO<sub>2</sub>-e,
- state the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

Notes about question 13

When providing answers to question 13, please do not deduct offset credits, Renewable Energy Certificates etc, or net off any estimated avoided emissions from the export of renewable energy, carbon sequestration (including enhanced oil recovery) or from the use of goods and services. Opportunities to provide details of activities that reduce or avoid emissions are provided elsewhere in the information request.

Carbon dioxide emissions from biologically sequestered carbon e.g. carbon dioxide from burning biomass/biofuels should be reported separately from emissions Scopes 1, 2 and 3. If relevant, please report these emissions in question 15. However, please do include any nitrous oxide or methane emissions from biomass/biofuel combustion in your emissions under the three scopes.

13.1 Employee business travel

Describe the main sources of emissions

Description of the sources:

In 2008, AREVA decided to extend its environmental reporting to indirect GHG emissions from business trips (air+any transportation by bus, or plane (mining activity), in the context of a service dedicated to transporting AREVA employees to their workplace)

Employee business travel concerns AREVA employees using:

- \_ any air transport for work assignments
- \_ any transportation by bus, or plane, in the context of a service dedicated to transporting AREVA employees to their workplace.

Emissions in metric tonnes CO<sub>2</sub>-e.

Emissions: 52 143 tons CO<sub>2</sub> equivalent

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used

for calculating emissions.

Reporting performed at basic entity level:

Indirect GHG emissions linked to transportation dedicated to AREVA employees (For example: La Hague bus service and weekly air links with McClean, Canada); In terms of dedicated transport, this involves requesting that transport service providers communicate their fuel consumption, or average fuel consumption.

Reporting performed at Corporate level (group indicator):

Indirect GHG emissions linked to transportation not dedicated to AREVA employees for work assignments. Calculation of emissions concerns only commercial flights taken by AREVA employees.

See attachment for further information on measurement protocole

### 13.2. External distribution/logistics

Describe the main sources of emissions

Description of sources:

Reporting on freight transportation started during the 2008 annual campaign. The reliability of reporting will increase over the coming quarters.

Indicator 13.5: Indirect greenhouse gas emissions (GHG) linked to the transportation of goods (manufactured or semi-finished products, raw materials, waste, products, equipment, inputs (deliveries) and outputs (dispatches) at an AREVA site, all transportation excluding documents)

Calculation method:

The GHG emissions measurement unit used is ton of CO<sub>2</sub> equivalent (tCO<sub>2</sub>e).

To avoid counting GHG emissions linked to transportation between two AREVA sites twice, only the dispatching site is taken into account in the emissions calculation.

The Logistics Business Unit (BUL) is responsible for creating the GHG emission inventory for all transportation, and for providing the AREVA entities, for which they provide transportation, with a detailed assessment of GHG emissions for each Business Unit (BU). The BU is responsible for distributing the GHG emissions results transmitted by the BUL to the basic entities for their input into internal reporting (STAR).

The Logistics BU will make the assessment of its indirect GHG emissions concerning transportation outside AREVA available in internal reporting system.

In 2008, all nuclear goods or materials (class 7) transportation were reported. The emissions linked to this particular scope = 38 419 tons CO<sub>2</sub> equivalent.

Concerning goods and materials (non nuclear) (inputs and outputs) the reporting was not considered exhaustive = 51 987 tons CO<sub>2</sub> equivalent.

In 2009, we decided to report 100% of emissions linked to output transportation.

Concerning input transportation, work is in progress with 6 pilot sites which will help to consolidate the methodology.

Emissions in metric tonnes CO<sub>2</sub>-e.

Emissions : 90 406 tons CO<sub>2</sub> equivalent

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

See attachment for further information on measurement protocole

### 13.3 Use/disposal of company's products and services

For auto manufacture and auto component companies – please refer to the additional questions for these sectors before completing question 13.3.

Describe the main sources of emissions

We do not account for emissions related to the use or disposal of our products and services once they are delivered to our utility customers.

Emissions in metric tonnes CO<sub>2</sub>-e.

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

### 13.4 Company supply chain

Describe the main sources of emissions

These emission are accounted for in 13.2

Emissions in metric tonnes CO<sub>2</sub>-e.

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used



for calculating emissions.

### 13.5 Other

If you are reporting emissions that do not fall into the categories above, please categorise them into transferred emissions and non-transferred emissions (please see guidance for an explanation of these terms).

Please report transfers in the first three input fields and non-transfers in the last three input fields.

#### Transfers

Describe the main sources of emissions

None

#### Transfers

Report emissions in metric tonnes of CO<sub>2</sub>-e.

#### Transfers

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

#### Non-transfers

Describe the main sources of emissions

#### Non-transfers

Report emissions in metric tonnes of CO<sub>2</sub>-e.

#### Non-transfers

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

13.6 If you have not provided information about one or more of the categories of Scope 3 GHG emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 3 indirect emissions information in future.

#### Further information

<http://cdp.cdproject.net/attachedfiles/Responses/53247/10397/AREVA-GHG-Scope-3-Measuring-Protocole.pdf>

## 14. Emissions Avoided Through Use Of Goods And Services (New for CDP 2009)

14.1. If your goods and/or services enable GHG emissions to be avoided by a third party, please provide details including the estimated avoided emissions, the anticipated timescale over which the emissions are avoided and the methodology, assumptions, emission factors (including sources), and global warming potentials (including sources) used for your estimations.

We offer the following CO<sub>2</sub>-free products and technologies to our customers, thus helping them avoid or reduce their own emissions:

A/ nuclear power plants and associated nuclear fuel services :

The group is the world leader supplier of the nuclear industry and the only company to cover all industrial activities in this field (except the power generation itself). The comparison between the energy production sectors show that the GHG emissions of nuclear power plants are the lowest varying between 6 and 29 g CO<sub>2</sub>/kWh depending on the enrichment method and the mix. As a global illustration : in Europe emissions avoided through nuclear generated electricity are approximately equivalent to the total emissions of the European automobile fleet.

B/ Biopower is considered carbon neutral by US Federal and state environmental agencies.

The renewable energy power plants engineered and supplied by the Renewable Energy Business Unit provide significant GHG emissions savings to their owners, when compared to carbon intensive energy sources

As indicative information only, we calculated, using the countries grid carbon factor as baseline, that the plants already installed by our Renewable Energy business unit save more the 3 millions tCO<sub>2</sub>e per year.

In addition, projects located in developing countries generate CERs under the Clean Development Mechanism (CDM):

- Ø On average, 50000 CER/year for a 10 MWe capacity biomass power plants in India
- Ø On average, 30000 CER/year for a 10 MWe capacity biomass power plants in Thailand
- Ø On average, 30000 CER/year for a 50 MWe capacity biomass power plants in Brazil

Project located in developed countries can also generate carbon credits under Joint Implementation (JI) or voluntary schemes. For instance, offshore wind turbines installed in developed countries may generate ERUs under the JI, provided that projects are approved by the host government. However projects are assessed on a case-by-case basis.

In all cases, the methodologies used to calculate the GHG emission savings from renewable energy projects are approved CDM methodologies, available on the UNFCCC website (<http://cdm.unfccc.int/index.html>)

C/ Wind Power is a CO2 free energy solution,  
D/ Transmission and Distribution of electricity

Our Transmission and Distribution (T&D) division also helps its customers improve their grid operations while reducing CO2 emissions, 25% of which come from electricity generation. There are four major areas of improvement:

- Demand-side management (DSM) programs that encourage consumers to modify their level and pattern of electricity usage
- Low CO2-emission energy sources
- Improved network efficiency
- Reduced emissions from grid equipment

As an example, the Nordic Operations and Information System (NOIS) combines all these areas. NOIS, an energy management system designed by T&D and implemented in Northern Europe, interconnects hydro, wind and solar plants, helping users optimize generation resources. Utilities access production and supply data in real time, then send the right amount of power from the right source to the right customer at the right price.

Another way AREVA tries to help customers cut their CO2 emissions is by boosting transmission efficiency by reducing losses. Most power networks supply alternating current (AC), but AC transmission entails major losses. New AREVA technologies enable efficient trading and transmission via High Voltage Direct Current (HVDC) networks, which immediately reduces losses. HVDC technology is the only way to connect different AC frequencies or voltages together; for example across regional or country boundaries. As such, it is the most efficient way to transmit large quantities of electricity over long distances. As a result, HVDC is in high demand to link AC networks to low-emission power sources, such as offshore wind parks.

When our activities can contribute to climate change, for example the supply and the maintenance of SF6 switchgear, we try to work on eco design to limit the leakages and supply an attractive GHG solution to our customers: AREVA T&D has worked to develop a patented special profile for the gaskets with three seals. High tightness and low leakage rates are achieved thanks to a huge inner sealing surface. This surface is broader than an ordinary O-ring, for instance, therefore the SF6 losses of the flange are minimized. This improvement represents an attractive design for our customers.

Further information

## 15. Carbon Dioxide Emissions from Biologically Sequestered Carbon: (New for CDP 2009)

An example would be carbon dioxide from burning biomass/biofuels.

15.1. Please provide the total global carbon dioxide emissions in metric tonnes CO<sub>2</sub> from biologically sequestered carbon.

Emissions in metric tonnes CO<sub>2</sub> - Please use whole numbers only

0

Further information

At this time, we do not burn biologically sequestered carbon in our own operations.

For the future, we are assessing projects to burn biomass and biofuels and will modify our reporting protocol if those projects are confirmed to be in accordance with the GHG protocol, as the GHG Protocol states that carbon dioxide from the combustion of biologically sequestered carbon must be reported separately from the three scopes.

## 16. Emissions Intensity: (CDP6 Q3(b))

16.1. Please supply a financial emissions intensity measurement for the reporting year for your combined Scope 1 and 2 emissions.

Please describe the measurement.

We follow our GHG emissions per turnover.

In 2008, the AREVA group's direct greenhouse gas emissions amounted to 771,648 metric tons of CO<sub>2</sub> equivalent, a 22.4% drop from 2007. At constant turnover, these emissions dropped 56.7% from 2004 to 2008. Of these emissions, 46% are linked to fossil fuels, 27% to sulfur hexafluoride (SF<sub>6</sub>) and 22% to nitrous oxide (N<sub>2</sub>O).

There was a 4% decrease in SF<sub>6</sub> emissions in 2008 compared with 2007, at constant turnover.

16.1.1. Give the units. For example, the units could be metric tonnes of CO<sub>2</sub>-e per million Yen of turnover, metric tonnes of CO<sub>2</sub>-e per US\$ of profit, metric tonnes of CO<sub>2</sub>-e per thousand Euros of turnover.

Total GHG Scope 1 + Total GHG Scope 2/ Euros revenue

tCO<sub>2</sub> e/ billion euros revenue

16.1.2. The resulting figure.

Use a decimal point if necessary. Please use a "." rather than a ",", i.e. please write 15.6 rather than 15,6

85.73

16.2. Please supply an activity related intensity measurement for the reporting year for your combined Scope 1 and 2 emissions.

Please describe the measurement.

We consider that to follow GHG emissions per revenue is also a good GHG measurement reported to our activity. We also follow the total GHG emissions compared to our total energy consumption: this indicator is used to assess average total CO2 emissions per 1 MWh consumed

16.2.1. Give the units e.g. metric tonnes of CO<sub>2</sub>-e per metric tonne of output or for service sector businesses per unit of service provided.

total CO2 emissions per 1 MWh consumed.

16.2.2. The resulting figure.

Use a decimal point if necessary. Please use a "." rather than a ",", i.e. please write 15.6 rather than 15,6

0.37

Further information

## 17. Emissions History: (CDP6 Q2(f))

17.1. Do emissions for the reporting year vary significantly compared to previous years?

Yes

In 2008, the AREVA group's direct greenhouse gas emissions amounted to 771,648 metric tons of CO<sub>2</sub> equivalent, a 22.4% drop from 2007. At constant revenue, these emissions dropped 56.7% from 2004 to 2008. Of these emissions, 46% are linked to fossil fuels, 27% to sulfur hexafluoride (SF<sub>6</sub>) and 22% to nitrous oxide (N<sub>2</sub>O).

There was a 4% decrease in SF<sub>6</sub> emissions in 2008 compared with 2007, at constant operations.

Our scope 2 indicator decreased of 31% at constant revenue between 2004 and 2008. This is the result of ambitious actions plans implemented since 2004. The largest consumers are implementing action plans based on the findings of preliminary energy efficiency studies, with the goal of stabilizing and ultimately reducing the group's energy consumption.

All of our methodological tools – including the eco-efficiency awareness kit, best practice handbooks, best available technologies, and energy news – are designed for all group employees.

Accounting for a third of the group's total emissions, N<sub>2</sub>O emissions from the Malvésí site have decreased significantly following events impacting the site's operations this year.

An installation on the precipitation facility's ventilation system to decompose N<sub>2</sub>O into oxygen and nitrogen will enable the elimination of these emissions by September 2009.

The La Hague site, whose boilers were the group's only facilities subject to the national quota allocation plan (PNAQ), saw its GHG emissions drop 37.5% in 2008 compared with 2007, whereas its energy consumption only dropped by 4.5% for comparable operations. This result was achieved principally by replacing the heavy fuel oil boilers with electric ones.

If the answer to 17.1 is Yes:

17.1.1. Estimate the percentage by which emissions vary compared with the previous reporting year.

This box will accept numerical answers containing a decimal point. Please use "." not ",", i.e. write 10.6, not 10,6.

22.4 %

Have the emissions increased or decreased?

Decreased

Further information

## 18. External Verification/Assurance: (CDP6 Q2(d))

18.1. Has any of the information reported in response to questions 10 – 15 been externally verified/assured in whole or in part?

Yes, it has been externally verified/assured in whole or in part. (Please continue with questions 18.2 to 18.5)

It would aid automated analysis of responses if you could select responses from the tick boxes below. However, please use the text box provided if the tick boxes menu options are not appropriate.

18.2. State the scope/boundary of emissions included within the verification/assurance exercise.

Scope 1 Q10.1

Please use the text box below to describe the scope/boundary of emissions included within the verification/assurance exercise if the tick box menu options above are not applicable.

Our reporting is reviewed by our external auditors who have delivered a reasonable assurance report concerning :

- our 2008 Direct GHG emissions ( excluding transport)
- our energy consumption

18.3. State what level of assurance (eg: reasonable or limited) has been given.

The reasonable level of assurance has been given.

18.4. Provide a copy of the verification/assurance statement.

Please attach a copy/copies.

[http://cdp.cdproject.net/attachedfiles/Responses/53247/10398/AREVA-External\\_verification\\_report.pdf](http://cdp.cdproject.net/attachedfiles/Responses/53247/10398/AREVA-External_verification_report.pdf)

18.5. Specify the standard against which the information has been verified/assured.

Since 2003, AREVA is asking a verification of environmental, social and security indicators present in the sustainable development report published by the group.

The work carried out during the intervention aimed to ensure:

- understanding and proper application by the AREVA Environment Department of the procedures for environmental reporting, social and security;
- the validity of the data at level n + 1.

The procedure PO\_COG\_ENV\_001 entitled "Organization of data control of SD reporting by environment department" describes the organization of the Environment department for reporting and controls that are made by specialists of the environment specialists. This procedure, introduced in 2006 was updated in 2008 (version of December 1).

18.6. If none of the information provided in response to questions 10-15 has been verified in whole or in part, please state whether you have plans for GHG emissions accounting information to be externally verified/assured in future.

Further information

19. Data Accuracy: (CDP6 Q2(e) – New wording for CDP 2009)

19.1. What are the main sources of uncertainty in your data gathering, handling and calculations e.g.: data gaps, assumptions, extrapolation, metering/measurement inaccuracies etc?

If you do not gather emissions data, please select emissions data is NOT gathered and proceed to question 20.

Emission data is gathered.

The main sources of uncertainty in our data gathering, handling and calculations are:

metering/measurement inaccuracies: for example, when our measures are based on a quarterly concentration measure of concentration and flow and then the annual quantity declared is extrapolated  
data gaps, for example, there could be a possible lack of completeness of emissions of refrigerants, some sites having difficulties to report their coolant emissions

19.2. How do these uncertainties affect the accuracy of the reported data in percentage terms or an estimated standard deviation?

Our internal reporting protocol is designed to establish, improve and maintain the accuracy of our GHG inventory. With our reporting protocol, it must be possible for a third party to check all data sources and documents used to measure, calculate and consolidate data (notably, internal and external auditors and statutory auditors). Such documents and evidence (invoices, meter reading, etc&) must be kept and made available during a 3 year period.

The sampling, measurements and analysis methods used must comply with appropriate national and international standards whenever such standards exist. If no such

standards exist, full documentation on the methods used must be archived and available for consultation.

Our specialized correspondents must perform the following general internal audit tasks: Audits must be formalized and filed. The data calculated must be compared with results from the various financial reporting stages. Any significant differences must be explained. Control ratios are established. Calculation checks: each calculation must be checked and the findings written down. Checks must be carried out by a third party (not the person who did the original calculations). The reporting protocol is a reference document for any external data audit. It must therefore be available for consultation by external auditors. Auditors must also have access to archived data. We have also evaluated our uncertainty margins to assess our GHG emissions inventory:

Combined uncertainty / method (%) in t CO<sub>2</sub>-e

N<sub>2</sub>O CO<sub>2</sub> comb. CO<sub>2</sub> proc EU ETS CO<sub>2</sub> proc. SF<sub>6</sub> Others Total  
 19,0% 2,5% 2,5% 20,0% 20,0% 20,0% 8,5%

19.3. Does your company report GHG emissions under any mandatory or voluntary scheme (other than CDP) that requires an accuracy assessment?

No (Please go to question 20.)

19.3.1 Please provide the name of the scheme.

EU emissions trading scheme

19.3.2. Please provide the accuracy assessment for GHG emissions reported under that scheme for the last report delivered.

The reasonable level of assurance has been given by our external auditors (13/02/2009 by Deloitte)

Further information

## 20. Energy and Fuel Requirements and Costs: (New for CDP 2009)

Please provide the following information for the reporting year:

Cost of purchased energy

20.1. The total cost of electricity, heat, steam and cooling purchased by your company.

Select currency

20.1.1. Please break down the costs by individual energy type.

Table 8 - The "Cost" column will not accept text. Please use whole numbers only.

Energy type	Cost	Currency
Electricity		
Heat		
Steam		
Cooling		

Cost of purchased fuel

20.2. The total cost of fuel purchased by your company for mobile and stationary combustion.

Select currency

20.2.1. Please breakdown the costs by individual fuel type.

Table 9 - The cost column will not accept text. Please use whole numbers only.

Mobile combustion fuels	Cost	Currency
-------------------------	------	----------

Stationary combustion fuels	Cost	Currency
-----------------------------	------	----------

## Energy and fuel inputs

The following questions are designed to establish your company's requirements for energy and fuel (inputs). Please note that MWh is our preferred unit for answers as this helps with comparability and analysis. Although it is usually associated with electricity, it can equally be used to represent the energy content of fuels (see CDP 2009 Reporting Guidance for further information on conversions to MWh).

### Purchased energy input

20.3 Your company's total consumption of purchased energy in MWh.

Please use whole numbers only.

3021000 MWh

### Purchased and self produced fuel input

20.4. Your company's total consumption in MWh of fuels for stationary combustion only. This includes purchased fuels, as well as biomass and self-produced fuels where relevant.

Please use whole numbers only.

14626204 MWh

In answering this question and the one below, you will have used either Higher Heating Values (also known as Gross Calorific Values) or Lower Heating Values (also known as Net Calorific Values).

Please state which you have used in calculating your answers.

[Net Calorific Values](#)

20.4.1. Please break down the total consumption of fuels reported in answer to question 20.4 by individual fuel type in MWh.

Table 10 - Please use whole numbers only

Stationary combustion fuels	MWh
<a href="#">Natural gas</a>	458277
<a href="#">Propane</a>	110436
<a href="#">Residual fuel oil</a>	283253
<a href="#">Gas/Diesel oil</a>	562151
<a href="#">Motor gasoline / petrol</a>	12086

## Energy output

In this question we ask for information about the energy in MWh generated by your company from the fuel that it uses. Comparing the energy contained in the fuel before combustion (question 20.4) with the energy available for use after combustion will give an indication of the efficiency of your combustion processes, taking your industry sector into account.

20.5. What is the total amount of energy generated in MWh from the fuels reported in question 20.4?

Please use whole numbers only.

20.6. What is the total amount in MWh of renewable energy, excluding biomass, that is self-generated by your company?

Please use whole numbers only.

0 MWh

## Energy exports

This question is for companies that export energy that is surplus to their requirements. For example, a company may use electricity from a combined heat and power plant but export the heat to another organisation.

20.7. What percentage of the energy reported in response to question 20.5 is exported/sold by your company to the grid or to third parties?

Please use whole numbers only.

0 %

20.8. What percentage of the renewable energy reported in response to question 20.6 is exported/sold by your company to the grid or to third parties?

Please use whole numbers only.

0 %

#### Further information

20.1. The total cost of electricity, heat, steam and cooling purchased by your company.

In France (66% of the total electricity consumption of the group worldwide), the total cost of electricity (975 145 MWh) is estimated to 42 090 k€.

20.1.1. Please break down the costs by individual energy type.

Data not available

#### Cost of purchased fuel

20.2. The total cost of fuel purchased by your company for mobile and stationary combustion.

In France:

the cost for heavy and domestic fuel is estimated to 11 678 kEuros

the cost for gasoline is estimated to 8 625 kEuros

The cost for diesel fuel for our Mining Business Unit is 22 589 kEuros .

20.4. Your company's total consumption in MWh of fuels for stationary combustion only. This includes purchased fuels, as well as biomass and self-produced fuels where relevant.

20.4.1. Please break down the total consumption of fuels reported in answer to question 20.4 by individual fuel type in MWh.

Fossil fuels Electricity Heat

Energy consumption in 2008 47 % 49% 4%

#### Energy output

20.5. What is the total amount of energy generated in MWh from the fuels reported in question 20.4?

Data not consolidated in terms of generation

## 21. EU Emissions Trading Scheme: (CDP6 Q2(g)(i) – New wording for CDP 2009)

Electric utilities should report allowances and emissions using the table in question EU5.

21.1. Does your company operate or have ownership of facilities covered by the EU Emissions Trading Scheme (EU ETS)?

Yes (Please answer the following questions - 21.2 to 21.4)

Please give details of:

21.2. The allowances allocated for free for each year of Phase II for facilities which you operate or own. (Even if you do not wholly own facilities, please give the full number of allowances).

Table 11 - Please use whole numbers only.

	2008	2009	2010	2011	2012
Free allowances metric tonnes CO2	91978	91978	91978	91978	91978

21.3. The total allowances purchased through national auctioning processes for the period 1 January 2008 to 31 December 2008 for facilities that you operate or own. (Even if you do not wholly own facilities, please give the total allowances purchased through auctions by the facilities for this period).

Total allowances purchased through auction

0

21.4. The total CO<sub>2</sub> emissions for 1 January 2008 to 31 December 2008 for facilities which you operate or own. (Even if you do not wholly own facilities, please give the total emissions for this period.)

Total emissions in metric tonnes

53610

Further information

## 22. Emissions Trading: (CDP6 Q2(g)(ii) - New wording for CDP 2009)

Electric utilities should read EU6 before answering these questions.

22.1. Please provide details of any emissions trading schemes, other than the EU ETS, in which your company already participates or is likely to participate within the next two years.

We participate or anticipate participating in trading schemes other than the EU ETS in the next two years.

Our renewable Business Unit has developed an expertise in the carbon market as the technologies offered to its customers are eligible to carbon credits

- u Biopower
- u Biogas
- u Waste Heat Recovery (WHR)
- u Wind

Areva is engineering and constructing those plants and can also offer a service for carbon project development (CDM development/PDD, approvals/Registration as CDM by UN, CDM data monitoring, issuance of VERs or CERs).

The Renewable Business Unit is well established in countries where carbon credits are generated (i.e. projects in developing countries such as Brazil, India, Thailand, etc.) and also close to the demand side for such credits (headquartered in Europe).

That is why AREVA is today active in the area of the Kyoto mechanisms such as CDM projects.

Moreover, within the scope of its multi-year plan to reduce its own greenhouse gas emissions (target for end 2011 vs. 2004 is 50% of GHG emissions reduction), AREVA has decided to become carbon neutral by offsetting its residual emissions through the purchase of credits originating from greenhouse gas reduction projects outside of the Group. To this end AREVA has contracted with EcoAct, with a view to selecting and supporting environmental projects (renewable energies, energy efficiency) benefiting the local populations in countries where the group has operations. These include providing the Brazilian industry with biomass, fuel switching in plants, etc. The group will continue to offset its emissions in addition to its current reduction program.

22.2. What is your overall strategy for complying with any schemes in which you are required or have elected to participate, including the EU ETS?

The first component of our strategy is to pursue our aggressive reduction plan for our own emissions, progressively including all reporting scopes.

In addition we are now involved in a carbon neutrality program and we will continue to offset our emissions on the voluntary market in addition to our current reduction program.

At the same time, our Renewable Energy business unit plans to develop its activity in CDM and VER project development in Brazil, India.

In the coming years, we anticipate that emissions at the group's facility (La Hague) covered by the EU ETS will still be below its allowance and that the plant will seek to sell its excess quotas as CER or EUA on the carbon market.

Further information

## 22. Carbon credits

22.3. Have you purchased any project-based carbon credits?

Yes. (Please answer the following questions)

Please indicate whether the credits are to meet one or more of the following commitments:

Primarily for voluntary offsetting of your own emissions

Please also:

22.4 Provide details including the type of unit, volume and vintage purchased and the standard/scheme against which the credits have been verified, issued and retired (where applicable).

We bought VERs for a total volume of 880 000 tons equivalent CO2 to offset our emissions.

The VER we bought were responding to the standards VCS 2007 and Social Carbon.

Through our partner EcoAct, we purchased those VERs from 6 different projects: biomass in Brasil, hydroelectricity in China and hydroelectricity in India.

The carbon projects the Renewable business unit sold were VER VCS and CER.

22.5. Have you been involved in the origination of project-based carbon credits?



Yes. (Please answer the following question)

22.6. Please provide details including:

- Your role in the project(s),
- The locations and technologies involved,
- The standard/scheme under which the projects are being/have been developed,
- Whether emissions reductions have been validated or verified,
- The annual volumes of generated/projected carbon credits,
- Retirement method if used for own compliance or offsetting.

The role of our Renewable business unit is:

- to engineer, procure and construct the power plant;

and, when relevant,

- to provide a CDM development service (ultimately leading to the generation of either CERs or VERs)

- to provide a VER development service

and/or from 2009 onwards, to purchase from our customers the VERs generated by the power plant if any.

In 2008 the location of projects is India. The technologies involved were biomass power and waste heat recovery.

The standard under which the projects are being developed is:

- the CDM

- the VCS

Emission reductions from the projects we are associated with (through our customers) were under validation in 2008.

The aggregated annual volume projected is 80000 tCO<sub>2</sub>e/year.

VERs generated by the projects and that we purchase will be used for our own offsetting policy in the following years. The VER will be validated and verified under the VCS and will be issued by a VCS registry holder. Then we will request the registry to cancel the VER (VCU – Voluntary Carbon Units) when relevant.

22.7. Are you involved in the trading of allowances under the EU ETS and/or project-based carbon credits as a separate business activity, or in direct support of a business activity such as investment fund management or the provision of offsetting services?

No. (Please go to question 23)

22.8. Please provide details of the role performed.

Further information

Performance

23. Reduction plans & goals: (CDP6 Q3(a))

23.1. Does your company have a GHG emissions and/or energy reduction plan in place?

Yes. (Please go to question 23.3)

23.2. Please explain why.

It would aid automated analysis of responses if you could select a response from the options below as well as using the text box. However, please just use the text box provided if the options are not appropriate.

If the menu options above are not appropriate, please answer the question using the text box below:

Goal setting

23.3. Do you have an emissions and/or energy reduction target(s)?

Yes. (Please answer the following questions)

23.4 What is the baseline year for the target(s)?

2004

### 23.5. What is the emissions and/or energy reduction target(s)?

AREVA has an aggressive GHG emissions reduction plan in place, as well as energy consumption reduction plans, deployed to all units within the Group. We have deployed energy saving programs in all our facilities. AREVA Environment Policy 2007-2011 requests each Business Unit cascades the policy on their facilities (through AREVA Way, integrated management system and within an ALARA approach), makes yearly progress plans to improve their eco-efficiency and allow the Group to achieve at the end of 2011 (from a 2004 baseline) the following objectives, in a constant activity and turnover scope :

- energy consumption : - 20%
- direct GHG emissions : - 50%

AREVA Environment Policy also request the major contributing sites in terms of SF6 emissions to reduce their emissions by at least 4% per year.

### 23.6. What are the sources or activities to which the target(s) applies?

The targets (emissions and energy) applies to all our factories.

### 23.7. Over what period/timescale does the target(s) extend?

The current policy with those targets applies until 2011.

Further information

## 23. GHG emissions and energy reduction activities

### 23.8. What activities are you undertaking or planning to undertake to reduce your emissions/energy use?

The major contributing sites in terms of energy consumption must update their improvement action plans every 3 years based on energy diagnosis. The methodological tools (advocacy kit, good practice guides, best available technologies, energy news) are available on the intranet of the group. Comurhex Malvesi site which is the major contributor in terms of N2O (97.7% of the group's emissions) has an action plan in progress to eradicate its emissions of N2O. All energy investments must favor the less CO2 emission intensive solutions (the cost of CO2 emissions is integrated in our business decisions). Concerning uranium enrichment (the enrichment plant is the biggest energy consumer in the AREVA Group) the decision has been taken to replace the present technology (gaseous diffusion) by a technology much less energy intensive (ultracentrifugation). The erection of the new plant using this technology is under progress. The ultracentrifugation process consumes 50 times less energy than the gaseous diffusion one.

We also monitor closely the use of SF6 in our T&D equipment manufacturing plants (SF6 is used in certain equipments because of its safety properties) but also in maintenance and dismantling of customers equipments. We deploy an eco-design approach including improvements concerning SF6 use.

Finally, an internal seminar about the prospective energy usage will be organized in 2009 in collaboration with the Strategy, Purchasing and Environment Corporate Departments. The participants, holders of industrial projects will be able to assess the advantages and disadvantages of available energies.

Further information

## 23. Goal evaluation

### 23.9. What benchmarks or key performance indicators do you use to assess progress against the emissions/energy reduction goals you have set?

We are benchmarking the practises of the other major industrial groups in the fields of Energy and Transport. In 2008, we also studied the practises of the other major groups concerning carbon offsetting.

Every quarter, we analyse our GHG emissions and energy consumption to check that we are on the good track to respect our targets.

At the end of each year, we do a more complete analysis to check that we are compliant with the targets and the way we still have to follow:

- energy consumption : - 20% (at constant turnover)
- direct GHG emissions : - 50% (at constant turnover)
- SF6 emissions reduction by at least 4% per year for the major contributing sites (at constant turnover).

In addition Areva is undertaking different activities to reduce GHG emissions:

1/ energy efficiency programs: the major contributing sites in terms of consumption of energy must update every 3 years their improvement action plans based on energy diagnosis (Environment Policy until 2011)

2/process modifications:

we have eliminated the SF6 emission of our front end facility of Pierrelatte (France) by the recycling of the fluor gaseous emission and the corresponding equipments are in operation since the end of 2006

Please also see our answer to question 23.8

Further information

## 23. Goal achievement

### 23.10. What emissions reductions, energy savings and associated cost savings have been achieved to date as a result of the plan and/or the activities described above?

Please state the methodology and data sources you have used for calculating these reductions and savings.

Reduction at constant turnover Energy consumption Direct GHG emissions

2004 100% 100%  
 2005 96% 94%  
 2006 87% 75%  
 2007 82% 62%  
 2008 77% 43%

23.11. What investment has been required to achieve the emissions reductions and energy savings targets or to carry out the activities listed in response to question 23.8 and over what period was that investment made?

Table 13 - The "Investment number" column will not accept text. Please use whole numbers only.

Emission reduction target/energy saving target or activity	Investment number	Investment currency	Timescale
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Further information

For GHG emissions reductions, the main investments are:

- 2007: suppression of the SF6 emissions of the factory COMURHEX Pierrelatte
- 2007: Increasing reliability of COMURHEX Malvesi factory with strong impacts on our N2O emissions
- 2007-2008: Creation of SF6 networks on several T&D factories to reduce our SF6 leakages:
  - Aix les Bains factory
  - Villeurbanne factory
  - Oberentfelden factory (Switzerland)
  - Macon factory

2008: Fuel switching (fuel to electricity) for our combustion units in the AREVA La Hague factory with impact on CO2 emissions

For energy savings:

- 2007-2009: New GB2 factory (Tricastin France) : Concerning uranium enrichment (the enrichment plant is the biggest energy consumer in the AREVA Group) the decision has been taken to replace the present technology (gaseous diffusion) by a technology much less energy intensive (ultracentrifugation). The erection of the new plant using this technology is under progress. The ultracentrifugation process consumes 50 times less energy than the gaseous diffusion one.
- 2008: Decrease Energy consumption of our AREVA La Hague factory: Fuel switching (diminution of fuel consumption) for steam production with combustion units
- Eco attitude training campaign in the entire group (2005-2008)
- Methodological tools (advocacy kit, good practice guides, best available technologies, energy news) available on the group Intranet.

23. Goal planning & investment

Electric utilities should read the table in question EU3 for giving details of forecasted emissions.

23.12. What investment will be required to achieve the future targets set out in your reduction plan or to carry out the activities listed in response to question 23.8 above and over what period do you expect payback of that investment?

Table 14 - The "Number" column will not accept text. Please use whole numbers only.

Plan or action	Investment number	Investment currency	Payback
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23.13. Please estimate your company's future Scope 1 and Scope 2 emissions for the next five years for each of the main territories or regions in which you operate or provide a qualitative explanation for expected changes that could impact future GHG emissions.

If possible, please use table 15 below to structure your answer to the question or alternatively use the text box below.

Our main issue for the next years is that our mining activity will strongly increase with important consequences on our energy consumption and GHG emissions.

For example, we consider that:

- our Imouraren (Niger) project will emit more than 200 000 t CO2 e in 2012 and more than 270000 in 2013.
- our Trekkopje (Namibia) project will emit 85000 t CO2 e in 2011

We currently evaluate various technical options that would help stabilize and even reduce our emissions initial forecasts regarding these new projects.

At the same time, we have an ongoing project, which involves a significant industrial investment, for the eradication of N2O emissions in our Comurhex Malvesi plant. The commissioning date is September 2009. This factory is the major contributor in terms of N2O (97,7% of the group's emissions) and was representing 22% of our direct GHG emissions in 2008.

Concerning our scope 2 emissions, those emissions are mainly due to our electricity consumption.

The main changes in the next 5 years will be:

- Concerning uranium enrichment (the enrichment plant "Eurodif" in the south of France is the biggest energy consumer in the AREVA Group) the decision has been taken to replace the present technology (gaseous diffusion) by a technology much less energy intensive (ultracentrifugation). The erection of the new plant using this technology is under progress. The ultracentrifugation process consumes 50 times less energy (mainly electricity) than the gaseous diffusion one.
- The choice to use electricity for our multi fuel boilers to produce heat on site (instead of heavy fuel) and the thought in progress to replace our boilers with new electric equipments or biomass power stations.

Scope 1 forecasted emissions in Table 15 below are in the following units.

t CO2 e

Scope 2 forecasted emissions in Table 15 below are in the following units.

t CO2 e

Table 15 - The "Scope" columns will not accept text. Please use whole numbers only.

Type in the name of the territory or region for which you are giving data and then press "Add Territory/Region". If giving a global figure instead of separate figures for regions or territories, please write "global" in the box labelled "Enter name of territory or region".

[Click here to see a sample table.](#)

Future reporting years:										
End date for year end DD/MM/YYYY	31/12/2009		31/12/2010		31/12/2011		31/12/2012			
Emission forecasts	Scope 1	Scope 2	Scope 1	Scope 2	Scope 1	Scope 2	Scope 1	Scope 2	Scope 1	Scope 2
Africa	189154		359222		425218		479122			
Europe	590247		372131		365710		359549			
Asia	58404		58013		57456		56922			
Americas	84840		84873		69278		68562			
Oceania	9100		9100		9100		9100			

23.14. Please estimate your company's future energy use for the next five years for each of the main territories or regions in which you operate or provide a qualitative explanation for expected changes that could impact future GHG emissions.

If possible, please use table 16 below to structure your answer to the question or alternatively use the text box below.

The Mining BU is one of the major contributor of the Group in term of energy consumption and consequently one of the major emitter of greenhouse gases emissions. AREVA expects increase in that consumption due to the new mine projects in Niger and Namibia. New facilities, such as the one planned in the US, will in the future increase the energy demand.

Nevertheless, in order to decrease our GHG emissions, AREVA is studying various options: for instance the feasibility to implement Concentrated Solar Power plants in Niger in order to provide carbon free energy and replace therefore some diesel energy power production.

All new projects are designed with the aim of reducing our environmental impacts.

Our new facility "Georges Besse 2" for uranium enrichment also plays a key role in our energy demand pattern: please see our answers to questions above, describing this project.

Concerning the Chemistry Business Unit, the Comurhex Malvesi plant also has a project to replace its fuel boilers with technologies like biomass power plants which will be less energy intensive and will permit to reduce our GHG emissions.

Table 16 - Please use whole numbers only.

Type in the name of the territory or region for which you are giving data and a description of the data you are giving e.g. electricity consumption. Then press "Add Row". If giving a global figure instead of separate figures for regions or territories, please use the word "global". This table will also accept different types of units e.g. units of volume or mass.

[Click here to see a sample table.](#)

Future reporting years:												
End date for year end DD/MM/YYYY												
Energy use estimates for territory/region	Number	Units	Number	Units	Number	Units	Number	Units	Number	Units	Number	Units

23.15. Please explain the methodology used for your estimations and any assumptions made.

For our estimations of GHG, we asked to the different Business Units to give us their estimations in the next years based on:

- their fuel consumption
- their refrigeration fluid consumption
- their GHG emissions due to their process

For our energy estimations, we worked with the Purchasing Department (fuel and electricity future estimations) and we verified that the datas given by the Business unit for the direct GHG emissions were coherent with those fuel estimations.

Further information

24. Planning: (CDP6 Q3(c))

24.1. How do you factor the cost of future emissions into capital expenditures and what impact have those estimated costs had on your investment decisions?

We have added in our investment review process a systematic analysis of the GHG emissions consequences (positive or negative) and the internal pay back calculation takes into account a financial valorisation of the GHG emitted or reduced.

The current reference value to be taken into account in a new investment is 25 Euros/tonne CO2 from 2008 to 2012 and 40 € per tonne of CO2 for a longer period, such levels being subject to periodic reviews and updates.

Further information

Governance

25. Responsibility: (CDP6 Q4(a))

25.1. Does a Board Committee or other executive body have overall responsibility for climate change?

Yes. (Please answer question 25.3 and 25.4)

25.2 Please state how overall responsibility for climate change is managed and indicate the highest level within your company with responsibility for climate change.

The overall climate change strategy is jointly defined between the relevant Corporate Directors at the Headquarters and approved by the Executive Committee. It is then implemented under the joint supervision of the Safety, Security, Health and Environment Senior VP, the Sustainable Development Senior VP, the CFO, and the Strategy Senior VP, all members of the Executive Committee. The Safety, Security, Health and Environment Department, the Sustainable Development and Continuous Improvement Department are then in charge of coordinating, deploying, and reporting on the Group's Environment Policy.

25.3. Which Board Committee or executive body has overall responsibility for climate change?

See above

25.4. What is the mechanism by which the Board or other executive body reviews the company's progress and status regarding climate change?

The Safety, Security, Health and Environment Department and the Sustainable Development and Continuous Improvement Department submit in coordination with each of the Business Units - periodical reports to the Executive Committee.

Such reports on GHG emissions and energy consumption form part of the mainstream reporting system of the Group.

Further information

26. Individual Performance: (CDP6 Q4(b))

26.1. Do you provide incentives for individual management of climate change issues including attainment of GHG targets?

Yes. (Please go to question 26.2)

26.2. Are those incentives linked to monetary rewards?

Yes, although not yet at full scale ,we provide incentives for individual management of climate change issues including attainment of GHG targets.

Our environmental policy has defined objectives in terms of GHGs emissions reduction. Cascading these targets to the Business Units allows them to set their individual objectives and progress plans on which they have to report periodically.The same applies for targets to reduce our energy consumption.

On certain factories of the group, there are incentives linked to monetary rewards, for example bonus and malus for the workers and management. In the countries where such scheme is not feasible, the management has the responsibility to reach the targets cascaded to the sites.

26.3. Who is entitled to benefit from those incentives?

The workers and the management.

Further information

27. Communications: (CDP6 Q4(c))

27.1. Do you publish information about the risks and opportunities presented to your company by climate change, details of your emissions and plans to reduce emissions?

We publish information about the risks and opportunities presented by climate change, details of our emissions and plans to reduce emissions in our annual report "Reference Document 2008": Appendix 4 Environment Report « Environmental performance improvement ».

We also provide relevant information on this topic in our annual activity and SD report (available at [www.aveva.com](http://www.aveva.com)) .

If so, please indicate which of the following apply and provide details and/or a link to the documents or a copy of the relevant excerpt:

27.2. The company's Annual Report or other mainstream filings.

Yes

<http://cdp.cdproject.net/attachedfiles/Responses/53247/10413/AREVA-Reference-doc-Annexe5.pdf>

27.3. Voluntary communications (other than to CDP) such as Corporate Social Responsibility reporting.

Yes

In addition to distributing our Activity Report, we engage on a regular basis in open discussions with external stakeholders.

As a member of the UN Global Compact we are also engaged in their "Caring for Climate" initiative, which represents an additional forum for dialogue on these topics.

Further information

28. Public Policy: (CDP6 Q4(d))

28.1. Do you engage with policymakers on possible responses to climate change including taxation, regulation and carbon trading?

Yes

Yes, we are in contact with policymakers dealing with possible responses to climate change including taxation, regulation and carbon trading

If so, please provide details.

AREVA participates in various forums, at the national, regional, or international levels, where climate change issues and the potential responses are discussed. In particular, AREVA is a member – both at national and international levels - of several Business and Industry or multistakeholder associations and organizations (for example the WBCSD, the UN Global Compact, the ICC, the WEC, the WNA) having an interest in engaging dialogue with policymakers and other actors of society on the issue of energy and climate change.

Further information