

VALUES CHARTER



January 2017

Dear Colleagues,

Created by two world class groups in the energy sector, ATMEA is an industrial venture with a global reach, a participant in the great economic, social and environmental challenges of our time.

But it also confers special responsibilities upon us, calling for behavior that is above reproach in all circumstances. Our codes of conduct are set forth in "ATMEA Values". These values are rooted in the conviction that rigorous business ethics are integral to strong financial performance.

This charter is both the reflection of our company culture and the expression of our commitment to sustainable development. This charter must govern our business decisions and activities every day. Also we must be proactive to encourage our suppliers, and our partners to implement this charter in the course of business with us.

I am counting on every one of you, regardless of your duties or country of origin, to put "Our Values at ATMEA" into practice, to defend them, and to promote them.

A handwritten signature in blue ink, appearing to read "Andreas Goebel".

Andreas Goebel

ATMEA President & CEO

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(December 31, 2016)***

1. PREAMBLE

A SHARED AND RESPONSIBLE VISION

As a commercial company in a competitive market, we offer technological solutions for nuclear power generation. Our goal is to achieve the highest possible returns and performance by designing, marketing and supplying products and services that are competitive, safe and harmless to the environment and that help improve standards of living for our planet's inhabitants. We expect every one of our employees to work towards this goal. The ATMEA employee complies with the laws of the country in which he or she works and, in compliance with the principles of Human Rights as defined in the Universal Declaration of Human rights approved by the United Nations.

Energy is a basic requirement for worldwide economic development, particularly in less developed countries, but the greenhouse effect depends to a great extent on how that energy is produced. ATMEA feels a strong sense of responsibility towards our neighbors on this planet and towards the generations that will succeed us. We endorse the U.N. Global Compact, and sustainable development is the core of ATMEA's industrial strategy. We also comply with the OECD Guidelines for Multinational Enterprises and with the Nuclear Power Plant Exporters' Principles of Conduct published by the Carnegie Endowment.

In a complex, multicultural and changing world, Our Values at ATMEA offers guidance to our employees. Not only will they find in them a clear explanation of their rights and responsibilities with regard to ATMEA and all of our stakeholders, they will also find values with which they can identify values worth defending.

ATMEA's values express the responsibility to our customers, our shareholders, our employees and all of the communities in which we play a role, directly or indirectly.

2. OUR VALUES AT ATMEA

OUR VALUES AT ATMEA ARE ALL ABOUT THE BEST POSSIBLE ECONOMIC PERFORMANCE AS A COMPANY WHILE RESPECTING HUMAN RIGHTS, THE ENVIRONMENT IN THE BROADEST SENSE OF THE TERM, AND THE LAWS THAT PROTECT THEM. IN A WORD, THESE VALUES SEEK TO SATISFY STAKEHOLDER REQUIREMENTS, IN THE PRESENT AND OVER THE LONG TERM.

Safety and Physical Security

The very nature of our business demands an acute sense of professionalism. For ATMEA this translates into implementation of the highest standards for safety and physical security. It also implies superior know-how as well as constant vigilance in the field of quality and environmental protection. ATMEA fosters team spirit and creates working conditions those are conducive to professional fulfilment.

Transparency

Transparency, sincere communications and openness to dialog are hallmarks of our communication programs. Our goal is to provide reliable and pertinent information enabling an objective assessment of our environmental, financial, social and societal performance.

Customer satisfaction

Our growth and sustainability as a company, and thus our ability to meet our commitments to our stakeholders, are conditioned on customer satisfaction. ATMEA applies all of its skills and resources to achieving customer satisfaction.

Profitability

We have a duty to achieve and maintain high returns for our shareholders, our employees and all of our stakeholders.

Responsibility

As a global player in the energy market, we have a special responsibility not only to our direct stakeholders, but also to the public at large, which will ultimately benefit from our products and services.

Integrity

Honesty, integrity and fairness govern all our actions and practices. We comply scrupulously with the laws and regulations of every country in which we operate.

Partnership

ATMEA seeks to build frank and constructive relationships with all stakeholders. To meet their needs, we cultivate a spirit of partnership based on mutual responsibility, receptiveness and dialog. Our approach is to become involved in every one of the communities in which we do

business. It is based on respect for local customs and on understanding the communities' wishes.

3. PRINCIPLES OF ACTION

WITH REGARD TO ATMEA'S STAKEHOLDERS

CUSTOMERS

ATMEA's goal is to offer products, services and expertise enabling our electric utilities and manufacturing customers to grow while meeting their responsibilities with regard to their own stakeholders.

ATMEA's ears are always open to our customers. We try to anticipate as well as meet their needs. We deliver what we promise and we don't promise more than we can deliver.

At ATMEA, we respect our customers' culture and work to protect their image and their interests.

Our technologies and services are designed, supplied and marketed in accordance with the highest safety, physical security, environmental protection and quality standards.

We protect the confidentiality of the data and know-how that our customers and partners entrust to us with the same degree of care as if they were our own, to the fullest extent of the law and regulatory requirements.

SHAREHOLDERS

ATMEA is guided by principles of corporate governance, particularly in its pursuit of shareholder returns and growth of their invested capital. Our shareholders are treated equally and they deserve accurate and pertinent financial information. And we, at ATMEA, make every effort to ensure that they receive it.

EMPLOYEES

ATMEA's commitments to its employees

ATMEA's workforce and management are constituted without discrimination as to, in particular, race, color, religion, age, gender, sexual orientation, political opinions, national ancestry or social origin.

We are committed to creating good working conditions and providing our employees with the resources they need to achieve professional fulfillment.

We trust our employees and are committed to honest, frank, two-way dialog with them and the organizations that represent them.

We wish to help employees maintain and increase their know-how in every aspect of their job, and we offer training programs for that purpose.

At ATMEA, we respect the privacy of our employees. ATMEA remains neutral regarding political opinions and philosophical or religious beliefs. We expect our employees to respect the beliefs of others and to refrain from any proselytizing.

Employee commitments to ATMEA

Employees are expected to comply with the ATMEA Values Charter. They are the owners and the defenders of these values, individually and as a group. The same is expected of temporary personnel.

ATMEA employees are customer oriented. They demonstrate an acute sense of professionalism, skill, precision and rigor, and obey laws and regulations.

They shall keep a formal trace of all the operations they perform, as well as of those that they have had subcontracted to others.

Alerting management to a malfunction or a legal or regulatory non-compliance is both a reflex and a duty. When it comes to ATMEA's proper operation, there shall be no internal hierarchical barrier to the transmittal of the alert.

Also ATMEA employees are entitled to alert an obvious malfunction or non-compliance with ATMEA Values Charter to AREVA's corporate business ethics advisor and/or MHI's compliance committee directly without any retaliation. Additionally ATMEA management secures that the whistle-blowing sources shall be kept confidential under all circumstances.

ATMEA employees take pride in achieving and maintaining excellence in product and service quality. They share knowledge between them to ensure that everyone does the same. Lessons learned are systematically put into practice.

SUPPLIERS AND SUBCONTRACTORS

ATMEA seeks, through a competitive process, lasting partnerships with its suppliers and subcontractors as a means of offering its customers the best possible level of service.

ATMEA shall do its utmost to ensure that regular suppliers to its core businesses, subcontractors, financial partners, consultants and commercial intermediaries (distributors, agents, etc.) subscribe to this Charter.

Their own regular suppliers and subcontractors and ATMEA's manufacturing partners are also urged to subscribe to it, at least for those activities directly relating to ATMEA.

We are committed to frank, fair, unbiased and mutually respectful relations with all of our suppliers, subcontractors and partners from the very beginning of the procurement process.

We shall protect their image and confidential data with the same degree of care as if they were our own.

We reserve the right to verify that supplier and subcontractor practices are consistent with ATMEA's values at any time and at any point in the supply chain for goods and services.

THE PUBLIC, THE PLANET

Our pledge to the community, the public and the planet is to respect the environment and nature, to aim to reduce the environmental footprint of our activities and to protect biodiversity in regions wherever we conduct business and to conserve natural resources, especially through recycling.

At ATMEA, we are committed to openness and involvement in public forums, and we use our information and communication resources ethically. We make every effort to provide

straightforward information on our business strategy, our technologies and our performance to decision-makers and citizens alike.

4. RULES OF CONDUCT

INTERNATIONAL TREATIES

In the nuclear business, we supply products, services and technologies only to nations and companies from those nations that comply with international provisions in force relative to non-proliferation, IAEA guarantees and export controls. This is an absolute condition. We also comply with the governmental export policies, laws and regulations of the nations in which ATMEA is located.

NUCLEAR POWER PLANT EXPORTERS' PRINCIPLES OF CONDUCT

On September 15th, 2011, ATMEA announced its adoption of a common set of "Principles of Conduct", together with the world leading nuclear plant vendors, including AREVA and MHI. Crafted over the last five years and facilitated by the Carnegie Endowment for International Peace, this code reflects the best practices for the export of nuclear power plants to countries with existing nuclear programs as well as those interested in developing civilian nuclear power. As a voluntary initiative, these Principles are not legally binding, but ATMEA shall implement the latest version (December 31, 2016) in the course of its business activities, demonstrating its commitment to the public in both word and deed.

CONFLICTS OF INTEREST

All employees shall show loyalty to ATMEA. Any situation in which their personal interests or those of their relations might conflict with the business interests of ATMEA should be immediately called to the attention of their immediate supervisor. Such conflicts include relationships with suppliers, customers, known competitors or any organization or person associated with ATMEA or that seeks such association.

Employees shall not intentionally place themselves in a conflict of interest situation and may not participate in any analysis, meetings or decisions relative to subjects in which they or their relations have a personal interest.

To avoid any ambiguity or appearance of favoritism, a spouse, child or other relation of the employee may only be hired or given any kind of assignment with the permission of the employee's supervisor, following the same conflict of interest rules, and only based on objective criteria. The employee in question may not participate in the selection of his or her relation.

Conflicts of interest called to the attention of a supervisor are reviewed on a case by case basis by both the supervisor and the supervisor's supervisor. They shall settle the conflict in accordance with current laws and regulations. It is not possible to list every conceivable conflict of interest situation. The following potential conflicts of interest shall in particular be declared by employees:

- a manager or a relation holding personal interests in a company that is a customer, supplier (including consultants, financial partners and others) or competitor of ATMEA ;
- an employee sitting on the board of directors or who is an executive of an outside company associated with ATMEA;
- an employee or a relation who is a consultant or occupies a management position or is a member of the marketing and sales or purchasing department of another company associated with ATMEA or that seeks such association;
- an employee or a relation who provides premises, equipment or personal property to ATMEA for a fee.

INSIDER TRADING

Business confidential information is identified to management and employees and it is their duty to maintain the confidentiality of such information with regard to others, including their relations.

Managers shall agree not to acquire or to sell, directly or indirectly, shares or securities in affiliate companies, whether publicly listed or not, as provided by law. They further agree to inform the appropriate management control body of their company immediately if any such acquisition or sale is made.

GIFTS, KICK-BACKS

General attitude

There is no tolerance for corruption

Our employees shall be impartial and honest in their dealings with government agencies, our customers, our suppliers and our partners. Employees shall immediately report bribes, solicitations or suspicious proposals by a third party to management.

Situations in which the employee could become obligated to a third party, or remarks that are simply ambiguous, or that may be compromising, even if only temporarily, shall be avoided.

Gifts

In the public sector and in the private sector, gifts and advantages from or to employees shall comply with local legislation, regulations and widely accepted customs, and shall be made in a completely transparent manner.

In this regard, employees must demonstrate sound judgment and a heightened sense of responsibility. If they have any doubt, they shall refer the matter to the appropriate level of management for a decision.

Gifts between ATMEA business units, or any other internal marketing expenses, are not allowed.

PAYMENTS

All ATMEA entities and all managers must be able to justify the actual source and use of any sum at all times. This also applies to interim project accounting.

All sums, whether paid or received, must be completely and exactly described in a contract and recorded as such in the corporate accounts.

Payment methods that intentionally or unintentionally hide the identity of a payer or a beneficiary are forbidden.

Any contract with a commercial intermediary must be approved in advance by the ATMEA CEO and, in case of significant decision, by the ATMEA Board.

POLITICAL FINANCING

ATMEA shall not provide funds or services to a political party, a holder of a public office, or a candidate for such office.

PATRONAGE, DONATIONS, HUMANITARIAN ACTIVITIES

Spirit

ATMEA's patronage and sponsorship activities follow the principles set forth in the Preamble to this Charter. These activities are strictly benevolent and are not contingent upon a commercial or administrative benefit to the company.

Conditions

ATMEA's role in these activities is limited to sponsorship. ATMEA takes no responsibility for the management or execution of the activities it sponsors and agrees to sponsor projects or activities on the express condition that the organizers take sole responsibility for them and have met all of the pertinent legal and administrative requirements and secured the necessary approvals and guarantees.

Donations to governmental agencies, local administrations or individuals are not allowed, nor are cash payments for any reason.

COMPETITION

ATMEA complies with Japanese, French and European anti-trust laws and with the corresponding laws in every country in which we do business.

THREATS AGAINST PERSONS AND PROPERTY

Employees shall immediately call any situation that may threaten persons or property to the attention of management.

Persons

ATMEA shall ensure that operations performed at its sites comply with applicable rules and regulations and with the two shareholders' policies on health, safety and environmental protection.

We conduct our operations with the utmost respect for human dignity and will not tolerate harassment of any kind nor any violation of human and children's rights.

Any failure to meet these obligations shall be called to the attention of the appropriate level of management, which shall immediately ascertain whether such practices have occurred, call for the necessary audits to be conducted, and put a stop to such practices immediately.

Reputation and brand image

ATMEA's reputation is one of its most vital assets.

Employees shall neither do nor say anything that could have a deleterious effect on ATMEA's reputation, image or credibility.

Within national and international relations, criticism, smugness, rudeness and disregard for others are signs of disrespect and are unacceptable behaviors in our employees.

Intangible corporate assets

Employees shall ensure that confidential information, whether marked as such or not, is protected from intrusion, theft, loss, damage, misappropriation, disclosure, reproduction, forgery or use for personal, unlawful or occult purposes, particularly on the internet and intranet.

This relates in particular to technical and management data; files on customers, prospects and suppliers; software; passwords; documentation and drawings; methods and know-how; trade secrets, knacks and adjustments; intellectual and industrial property; forecasts, contracts and agreements; unpublished cost and selling prices; strategic and commercial aims; R&D material; financial and corporate information; and the names of specialists and experts and their contact information.

PRIMACY OF OUR VALUES AND ETHICAL ALERTS AT ATMEA

If any blatant incident or breach of a statutory or regulatory obligation or violation of this Values Charter or compliance policies is observed, an immediate alert is a reflex and a duty. There are neither hierarchical barriers to the free circulation of information required to ensure the smooth running of ATMEA, nor any requisite rank for anyone alerting their superiors forthwith. ATMEA guarantees confidentiality and immunity for whistleblowers of good faith.

Any employee who receives an order that is manifestly contrary to the ATMEA Values Charter may legitimately refuse to comply, shall immediately report the matter to the CEO of ATMEA, and will not suffer any kind of retaliation if the facts can be established.

SANCTIONS

A deliberate violation of the Values Charter or Compliance Policies and procedures may lead to disciplinary action or even a judicial sanction.

THE TEN PRINCIPLES OF THE U.N. GLOBAL COMPACT

The Global Compact's principles in the areas of human rights, labor and the environment enjoy universal consensus derived from:

- the Universal Declaration of Human Rights
- the International Labor Organization's Declaration on Fundamental Principles and Rights at Work
- the Rio Declaration on Environment and Development

The ten principles are:

HUMAN RIGHTS

Principle 1

Businesses are asked to support and respect the protection of international human rights; and

Principle 2

make sure their own corporations are not complicit in human rights abuses.

LABOR

Principle 3

Businesses are asked to uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4

the elimination of all forms of forced and compulsory labor;

Principle 5

the effective abolition of child labor; and

Principle 6

the elimination of discrimination in respect of employment and occupation.

ENVIRONMENT

Principle 7

Businesses are asked to support a precautionary approach to environmental challenges;

Principle 8

undertake initiatives to promote greater environmental responsibility; and

Principle 9

encourage the development and diffusion of environmentally friendly technologies.

ANTI-CORRUPTION

Principle 10

Businesses should work against all forms of corruption, including extortion and bribery.

OUR VALUES

SAFETY AND PHYSICAL SECURITY

TRANSPARENCY

CUSTOMER SATISFACTION

PROFITABILITY

RESPONSIBILITY

INTEGRITY

PARTNERSHIP

NUCLEAR POWER PLANT AND
REACTOR EXPORTERS'
PRINCIPLES OF CONDUCT

December 31, 2016

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Doing It Right!

Updates

In keeping with the Preamble, participants will review and revise the Principles of Conduct as appropriate. To allow for regular updating of the text, vendors have agreed that new updates to the text will go into effect on January 1 of the subsequent year.

The Principles of Conduct were first finalized in Brussels, Belgium, in May 2011. They have been subsequently updated as follows:

- London, October 26, 2016 (final update)
- London, May 13, 2015
- Seoul, Korea, October 22, 2014
- Brussels, Belgium, March 6, 2014
- Toronto, Canada, September 26, 2013
- Tokyo, Japan, January 16, 2013
- Pittsburgh, PA, U.S.A., July 10, 2012
- Moscow, Russia, December 8, 2011
- Brussels, Belgium, May 20, 2011

Nuclear Power Plant Exporters’ Principles of Conduct

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Nuclear Power Plant Exporters’ Principles of Conduct

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PREAMBLE

Considering that responsible use of nuclear power plant technology is vital to help meet global energy requirements and address climate change in a sustainable manner;

Desiring to continuously improve safety, security, and environmental protection;

Conscious of the sensitive nature of nuclear materials and technology, and thus the necessity of using nuclear power plant technology exclusively for peaceful purposes;

Inspired by and seeking to complement national laws and regulations, international laws and norms, and the recommendations of vital institutions such as the International Atomic Energy Agency that promote the peaceful use of nuclear technology as a safe, secure, reliable, and efficient source of energy;¹

Committing to export strictly in compliance with **Nuclear Suppliers Group guidelines** and with the laws and policies of Vendor and Customer States; Recognizing that the establishment of any nuclear power program requires an effective legal and regulatory framework and technological and industrial infrastructure, and qualified personnel;

Mindful that a harmful event at a nuclear power plant anywhere can be considered to be a harmful event everywhere, and limit the contributions of nuclear energy;

Seeking to enhance public confidence by upholding high standards of transparency, integrity, ethical behavior, and social responsibility and to promote continuous improvement toward the implementation of global best practices;

Acknowledging that Customer States have the ultimate responsibility to regulate the construction, operation, and decommissioning of nuclear power plants in their jurisdictions;

Vendors adopting these Principles of Conduct will undertake good faith efforts to implement the best practices described in six principles: Safety, Security, Environmental Protection, Compensation for Nuclear Damage, Nonproliferation, and Ethics.

These principles are based upon best practices derived from the experience of nuclear power plant vendors and operators and the guidelines of the International Atomic Energy Agency. They were developed for the public good over several years through a non-governmental consensus process facilitated by the Carnegie Endowment for International Peace, with input and advice from regulators, operators, and internationally recognized experts.

These Principles have been and will be reviewed and revised as appropriate, including to reflect the lessons learned from the Fukushima nuclear accident following the earthquake and tsunami. Participating Vendors express their intention to follow these principles in designing nuclear power plants and in performing their activities. Participating Vendors will inform their

¹ These Principles cite documents in Appendix B, which will be reviewed by the participants as they evolve. Documents are highlighted in **boldface text**.

customers, suppliers, subcontractors, and other participants in the nuclear power plant industry about the nature, purposes, and benefits of these Principles of Conduct, and recommend their cooperation in applying them.

These Principles are voluntary, create no legal duty, and are not legally binding, but nevertheless reflect the genuine aspiration of the participants to apply these principles and make a good faith effort to achieve these goals. The reference language of these Principles of Conduct is English.

PRINCIPLE 1: SAFETY, HEALTH, AND RADIOLOGICAL PROTECTION

Before entering into a contract to supply a nuclear power plant to a Customer, Vendors expect that the Customer State:

1.1 Is an active party to the IAEA's **Convention on Nuclear Safety**, or has indicated its intention to become an active party before operation of the plant begins;

Before entering into a contract to supply a nuclear power plant to a Customer, Vendors will have made a reasonable judgment that the Customer State has:

1.2 A legislative, regulatory, and organizational infrastructure needed for implementing a safe nuclear power program with due attention to safety either in place or under development following the guidance provided in the **IAEA Safety Standard "Establishing the Safety Infrastructure for a Nuclear Power Programme"** (The information on infrastructure and the plans concerning its development should be provided by the Customer State based on its self-assessment or an independent external assessment such as a peer review conducted under the auspices of the IAEA);

1.3 Either an existing industrial infrastructure to support safe long-term operation, or a credible plan to develop such an infrastructure before operation of the nuclear power plant begins;² and

1.4 Taken into account international operating experience and severe accident considerations in determining the plant site.

Vendors commit to:

1.5 Export nuclear power plants that:

1.5.1 Apply consistent, high safety standards, reflecting the Vendors' safety goals and which are compatible with physical security requirements;

1.5.2 Reflect the uncompromising application of recognized safety principles, including the **IAEA Fundamental Safety Principles**;

1.5.3 Are based on reliable technology, which is proven either a) in operation or b) by a test program or analysis consistent with internationally recognized safety principles, before operation of the plant begins;

1.5.4 Are designed in accordance with the **IAEA Safety Requirements**,³ giving due consideration to relevant **IAEA Safety Guides**, and meeting regulatory requirements of the Customer State;

1.5.5 Meet or exceed GEN III safety objectives;

² An essential part of this industrial infrastructure is a power transmission grid suitable to provide reliable external power supply to the nuclear power plant.

³ See entry in Appendix B under **IAEA Safety Standards**.

- 1.5.6 Use components manufactured in accordance with the Vendors' technical specifications consistent with appropriate nuclear standards;
 - 1.5.7 Ensure their supply chain is subject to the Vendors' rigorous overall corporate quality assurance requirements; and
 - 1.5.8 Incorporate design provisions to address severe accident management and to take into account emergency response requirements.
- 1.6 Exchange information with the scientists and experts of the Customer State, as needed, to assist plant designers in adequately understanding the site-specific environmental and other circumstances affecting nuclear safety so as to be able to adapt the design as necessary to local conditions. Specifically, the adaptation should adequately address the extreme site specific hazards that may challenge safe plant operations.

When contracting to supply a nuclear power plant, Vendors will address the tasks and issues that require due attention during project implementation for achieving and demonstrating a high level of safety and quality. The responsibility for these tasks and issues should be clearly assigned in the contractual arrangements between the Vendor and the Customer.

- 1.7 Among the tasks which the parties should seek to address in contracting are:
- 1.7.1 Provision of safety documentation and validated safety analysis reports that are at least as rigorous as what one would provide if the nuclear power plant was built in the Vendor State;
 - 1.7.2 Promotion of a high safety culture as defined in the IAEA International Nuclear Safety Group report “**Key Practical Issues in Strengthening Safety Culture**,” in all work on the nuclear power plant site throughout the construction project⁴;
 - 1.7.3 Assurance of competent construction management;
 - 1.7.4 Assurance that the systems, structures, and components of the plant are constructed or manufactured and installed to meet the requirements in the specified standards;
 - 1.7.5 Making possible subcontracts on design, construction, manufacturing, installation, and quality control only with companies that have proven their qualifications and competence or have been evaluated and found to meet the requirements by the Vendor;
 - 1.7.6 Managing the work of the subcontractors as needed to ensure their performance in compliance with the specified standards and requirements;
 - 1.7.7 Development of the Customer's human resources and competencies for safe, long-term operation; and
 - 1.7.8 Development of written work procedures, and other guidance needed for safe operation, including emergency operating procedures and severe accident management procedures.

⁴ Vendors can also draw attention to the World Association of Nuclear Operators' Principles “**Traits of a Healthy Safety Culture**” as best practices for implementing the IAEA general principles on safety culture.

Recognizing that the prime responsibility for existing nuclear power plants they have provided rests with their operators and that Vendors do possess pertinent expertise and share with the operators a strong commitment to nuclear safety, Vendors agree to:

- 1.8 Partake in identifying appropriate safety enhancements to the nuclear power plants they have supplied;
- 1.9 Integrate essential safety enhancements in the future nuclear power plants they offer; and
- 1.10 Implement these safety enhancements, when requested and separately agreed upon with the operators.
- 1.11 Inform the Customer's State and the Customer of the importance of establishing emergency preparedness and response management programs before operation of the nuclear power plant commences.

Recognizing their unique expertise, Vendors may provide, if requested by the Customer and separately agreed, relevant information and guidance to the Customer's State and the Customer to help:

- 1.12 Improve the elements of the Customer State's national infrastructure that influence safe nuclear power plant operation, for example:
 - 1.12.1 Safety aspects of the site selection process;
 - 1.12.2 Development of local skills needed to maintain the nuclear plant in safe operational conditions;
 - 1.12.3 Development of comprehensive plans for offsite emergency management, including local and regional infrastructure;
 - 1.12.4 Transparent and public communication, including timely provision of information in emergency situations.⁵

The Vendors will urge Customers to establish connections with other operators of nuclear power plants, including pre-start-up reviews by the IAEA and World Association of Nuclear Operators,⁶ and study their relevant best practices for the purpose of learning from others' experiences and safety practices. Vendors will encourage Customers to consider becoming active members of the World Association of Nuclear Operators before operation of the nuclear power plant commences.

⁵ As specified by the **Convention on Early Notification of a Nuclear Accident** and the **Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency**.

⁶ For more information, see the **Charter of the World Association of Nuclear Operators**.

PRINCIPLE 2: PHYSICAL AND CYBER SECURITY

In designing nuclear power plants, Vendors will:

- 2.1 Incorporate comprehensive design provisions made for security, including cyber security;
- 2.2 Ensure security design provisions are compatible with safety and emergency response requirements;⁷
- 2.3 Cooperate with the Customer to incorporate the Customer State's Design Basis Threat;
- 2.4 Incorporate within design provisions the potential for damage from security threats in accordance with the Customer State's Design Basis Threat.

Before entering into a contract to supply a nuclear power plant to a Customer, Vendors will have made a reasonable judgment that the Customer State has or in a timely fashion and in good faith will have:

- 2.5 Provided information to the Vendor on the results of the Customer State's Design Basis Threat analysis sufficient to allow the Vendor to complete the design. The threat and risk analysis should take into account plant location and conditions in the region, consideration of the threat posed by potential cyber-attacks as well as internationally accepted standards;
- 2.6 Become an active party to the IAEA's **Convention on the Physical Protection of Nuclear Materials** as amended;
- 2.7 Participated in the United Nations **International Convention for the Suppression of Acts of Nuclear Terrorism**; and
- 2.8 Developed a national legislative and regulatory infrastructure for nuclear security, including adequate policies and procedures governing:⁸
 - 2.8.1 Allocation of responsibility for security among government and plant management;
 - 2.8.2 Implementation of a security response capability appropriate to the Design Basis Threat; and
 - 2.8.3 The interests of the population at large with respect to physical security provisions.

⁷ As discussed in the International Nuclear Safety Group's report on **the Interface between Safety and Security at Nuclear Power Plants**.

⁸ An example of such a nuclear security framework is given by the IAEA's **Nuclear Security Fundamentals: Objective and Essential Elements of a State's Nuclear Security Regime**.

Recognizing their unique expertise, in support of effective security provisions, Vendors may provide, if requested by the Customer and separately agreed, relevant information and guidance to the Customer State and the Customer to help establish in a timely fashion that:

- 2.9 Plant physical security provisions have been undertaken based on a well-established standard, such as the IAEA's **Convention on the Physical Protection of Nuclear Materials**, which typically:
 - 2.9.1 Use the Design Basis Threat to determine how to appropriately equip security staff and to limit the potential use of force to only that necessary;
 - 2.9.2 Establish appropriate standards for the selection, training, and testing of security staff and provisions to enforce them;
 - 2.9.3 Incorporate and address plant design sensitivities, including provisions for the protection of sensitive information and sensitive information assets;
 - 2.9.4 Take into account provisions for efficient plant operation, safety, and emergency response in security planning; and
 - 2.9.5 Ensure physical plant security and acknowledge respect for human rights;
- 2.10 Routine evaluations of the sufficiency of security response capabilities are undertaken.
- 2.11 An integrated safety and security oversight organization is established with responsibility for establishing, monitoring, and continuously adjusting the balance among security, safety, emergency response, and efficient plant operation; and
- 2.12 Continuous improvement and coordination between law enforcement, other Customer State agencies, and plant security are undertaken through follow-up, support, and joint training.

PRINCIPLE 3: ENVIRONMENTAL PROTECTION AND THE HANDLING OF SPENT FUEL AND NUCLEAR WASTE

Before entering into a contract to supply a nuclear power plant to a Customer, the Vendor will have made a reasonable judgment that the Customer State either has or will have in a timely manner:

- 3.1 Enacted national nuclear laws or developed a regulatory framework that:
 - 3.1.1 Formalizes and keeps current a credible national strategy and/or a plan to, in a safe, secure and environmentally sound manner:
 - 3.1.1.1 Store, treat/recycle, or otherwise manage spent fuel and radioactive waste;
 - 3.1.1.2. Decommission closed-down nuclear facilities; and
 - 3.1.1.3. Dispose of all radioactive wastes;
 - 3.1.2 Addresses safeguards obligations, safety, national and international security, human health, effective management of radioactive releases at all times, and environmental stewardship; and
- 3.2 Ratified, accepted, or otherwise applied the principles of the IAEA's **Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management**.

Vendors will seek to design plants that:

- 3.3 Enhance environmental benefits and minimize environmental impact in operations, including waste production, by applying relevant best practices such as those defined by International Standards Organization and the IAEA;⁹
- 3.4 Provide for safe and secure on-site storage of spent fuel; and
- 3.5 Facilitate ultimate plant decommissioning.

In contracting to sell nuclear power plants, Vendors will seek to:

- 3.6 Address with the Customer his responsible management of spent fuel and other radioactive materials and waste.

Recognizing their unique expertise, Vendors will undertake, as specifically agreed, to cooperate with and provide relevant information to pertinent governments and Customers to help promote:

⁹ Including the ALARA principle.

- 3.7 Protection of the environment through the responsible use of natural resources, the reduction of waste and emissions, and the minimization of harmful impacts to the environment, in accordance with the best technically and economically sound practices of the worldwide nuclear power industry;
- 3.8 A precautionary approach to the environment consistent with the definition provided in the **United Nations Global Compact** and the **Rio Declaration**; and
- 3.9 Development in Customer States of systems for the long-term management of spent fuel and/or radioactive waste that are rational, economic, safe, secure, and consistent with Customer States' safeguards obligations.

PRINCIPLE 4: COMPENSATION FOR NUCLEAR DAMAGE

Before entering into a contract to supply a nuclear power plant to a Customer, the Vendor will independently make a reasonable judgment that the Customer State has in force, or will have in force before fuel is delivered in the Customer State's territory, a legal regime providing adequate and prompt compensation for the public in the unlikely event of an accident, with protection in effect equivalent to one or more of the following best practices:

- 4.1 A legal regime for compensation and nuclear liability that, *inter alia*:
 - 4.1.1 Contains adequate liability limits and financial protection consistent with current international standards;
 - 4.1.2 Is backed by Customer State guarantees;
 - 4.1.3 Ensures that claims for compensation by possible victims will be channeled to the operator of the nuclear power plant(s) that would be strictly and exclusively liable and will be channeled to one single competent court;
 - 4.1.4 Includes compensation for personal injury, property damage, environmental damage, loss of income, economic loss, and preventive measures;
 - 4.1.5 Does not allow compensation amounts to be set aside or reduced by unilateral strict reciprocity requirements; and/or
- 4.2 A treaty relationship with the Vendor State under either the IAEA's **Vienna Convention on Civil Liability for Nuclear Damage**, as amended or, if eligible, the Organisation for Economic Cooperation and Development's **Paris Convention on Third Party Liability in the Field of Nuclear Energy**, as amended; and/or
- 4.3 The IAEA's **Convention on Supplementary Compensation for Nuclear Damage** (CSC)—which is the IAEA's unified global nuclear liability regime that any State can join if it is a Party to the Vienna Convention or Paris Convention or has a domestic law that is consistent with the CSC Annex. Such action would enable global treaty relations crucial to assure worldwide compensation and liability protection during plant operation and transnational transport.

PRINCIPLE 5: NONPROLIFERATION AND SAFEGUARDS

The Vendors are committed to the peaceful use of nuclear energy.

*Each Vendor recognizes that its Vendor State is committed to a policy that nuclear power plants and related materials, equipment and technology¹⁰ shall be provided to and used by Customer States exclusively for peaceful purposes, consistent with the **Treaty on the Non-Proliferation of Nuclear Weapons**, and in conformity with **Nuclear Suppliers Group Guidelines** and **pertinent United Nations Security Council Resolutions**.*

Each Vendor further recognizes that its Vendor State has enacted export laws and/or regulations intended to implement that policy, declares that it is bound by and fully committed to implementing that policy, and supports a strong nonproliferation regime.

Accordingly, each Vendor exports nuclear power plants and related materials, equipment and technology solely in accordance with relevant national export laws and/or regulations, which implement the foregoing.

As a manifestation of their strong commitment to peaceful uses of nuclear energy and nonproliferation, Vendors undertake to:

- 5.1 Pay special attention to and promote proliferation-resistant designs and take IAEA safeguards requirements into account in design;
- 5.2 Pay special attention to the exclusively peaceful use of trigger list and sensitive dual use items delivered by the Vendor, including the requirements, as applicable to Vendors, in bilateral agreements between Vendor State and Customer State, **Nuclear Suppliers Group guidelines**, **pertinent United Nations Security Council Resolutions** and Vendor contracts;
- 5.3 Seek to obtain a commitment from the Customer to implement in a timely manner at the facility a System of Accounting for and Control of Nuclear Materials and a safeguards approach consistent with its IAEA obligations;
- 5.4 Inform in a timely manner the appropriate authority of the Vendor State and, as appropriate, other Vendors adhering to these Principles, of any serious nonproliferation concerns related to the equipment, materials, and technology provided by the Vendor to the Customer; and
- 5.5 Consult closely with the Vendor State and act in accordance with its instructions upon being informed by the Vendor State or becoming directly aware of actions or events that would raise serious concerns about compliance with the global nonproliferation regime.¹¹

¹⁰ As defined in the latest revision of IAEA INFCIRC/254/Part 1.

¹¹ Examples of such actions or events are given in the Appendix A.

*In addition to the above-mentioned provisions, Vendors welcome the inclusion by Vendor States of provisions in bilateral agreements requiring a Customer State to implement effective nuclear export controls and to have an **IAEA Additional Protocol** in force.*

PRINCIPLE 6: ETHICS

To enhance confidence in nuclear power, vendors undertake to:

- 6.1 Comply with the highest ethical standards in their interactions with Regulators and Customers;
- 6.2 Communicate with good faith, and in the spirit of transparency, about these principles;
- 6.3 Promote worker safety and protect public health and the environment;
- 6.4 Take into account the principle of sustainable development, including the effects of projects on the environment and society;
- 6.5 Proactively cooperate with Customers to inform and consult in a participatory manner with nearby communities regarding public information about planned project activities and their potential social and environmental effects;
- 6.6 Have in place internal programs to discourage corruption and conflicts of interest and to encourage compliance with anticorruption laws, such as those implementing the **United Nations Convention Against Corruption** and/or the **OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions**, and seek to obtain a reciprocal commitment from Customers;
- 6.7 Respect through word and deed fundamental labor rights, including the prohibitions on child and forced labor, non-discrimination in employment, and the rights to freedom of association and collective bargaining;
- 6.8 Respect human rights pursuant to the **Universal Declaration of Human Rights**, recognizing that States bear responsibility for protecting human rights; and
- 6.9 Encourage their suppliers, subcontractors, and other participants in the nuclear power plant industry to demonstrate the same respect for these ethical commitments.

APPENDIX A
APPENDIX TO PRINCIPLE 5: NONPROLIFERATION AND SAFEGUARDS

Examples of actions and events that would constitute serious concerns about compliance with the global nonproliferation regime:

- A.1 A State issues a withdrawal notification from the **Treaty on the Non-Proliferation of Nuclear Weapons** or has unilaterally terminated or suspended the implementation of a safeguards agreement with the IAEA;
- A.2 The IAEA finds, with respect to a State's activities, that the IAEA is no longer able, because of the obstruction by or lack of transparency and cooperation from a State, to fully implement the **IAEA Comprehensive Safeguards Agreement** or the **IAEA Additional Protocol**, or verify that there has been no diversion of nuclear material required to be safeguarded;
- A.3 A State is found by the IAEA to be in non-compliance with its safeguards agreement(s) under Article XII.C of the IAEA Statute; and/or
- A.4 A State proceeds with the test of a nuclear explosive device.

Upon being informed by the Vendor State or becoming directly aware of any such case the Vendor will consult and act in accordance with instructions from the appropriate authorities of the Vendor State. Vendor State responses may include, among others, those indicated in **UN Security Council Resolution 1887**, in the **Final Document of the 2010 NPT Review Conference**, and consistent with Article XII.C of the IAEA Statute.

APPENDIX B: REFERENCES

INTERNATIONAL CONVENTIONS

United Nations Convention Against Corruption—Adopted by the UN General Assembly in resolution A/RES/58/4, October 31, 2003.

OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions—Adopted by the Organisation for Economic Cooperation and Development, signed December 17, 1997.

Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, Reproduced in IAEA INFCIRC/336, adopted September 26, 1986.

Convention on Early Notification of a Nuclear Accident, Reproduced in IAEA INFCIRC/335, adopted September 26, 1986.

Convention on Nuclear Safety—“Convention on Nuclear Safety,” IAEA INFCIRC/449, adopted June 17, 1994.

Convention on the Physical Protection of Nuclear Material (CPPNM)—Reproduced in IAEA INFCIRC/274/Rev.1, May 1980, and including its amendment, reproduced in GOV/INF/2005/10-GC(49)/INF/6, September 6, 2005.

Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management—“Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management,” Reproduced in IAEA INFCIRC/546, adopted December 1997.

Convention on Supplementary Compensation for Nuclear Damage (CSC)—“Convention on Supplementary Compensation for Nuclear Damage,” IAEA INFCIRC/567, adopted September 12, 1997.

International Convention for the Suppression of Acts of Nuclear Terrorism—Adopted by the UN General Assembly in resolution A/RES/59/290, April 2005.

Paris Convention on Third Party Liability in the Field of Nuclear Energy—Adopted by the Organisation for Economic Cooperation and Development, February 12, 2004.

Vienna Convention on Civil Liability for Nuclear Damage, Reproduced in IAEA INFCIRC/566, adopted September 12, 1997.

IAEA DOCUMENTS

“Considerations to Launch a Nuclear Power Programme”—“Considerations to Launch a Nuclear Power Programme,” International Atomic Energy Agency, Reproduced in IAEA GOV/INF/2007.

“IAEA Action Plan on Nuclear Safety”—Approved by the Board of Governors on 13 September 2011.

IAEA SAFETY STANDARDS

*Standards of safety issued pursuant to Article III(A)(6)10 of the IAEA Statute. Safety standards issued since 1997 in the IAEA Safety Standards Series are designated as **Safety Fundamentals, Safety Requirements or Safety Guides.***

“Establishing the Safety Infrastructure for a Nuclear Power Programme”—“Establishing the Safety Infrastructure for a Nuclear Power Programme,” Specific Safety Guides, IAEA Safety Standards Series, No. SSG-16, 2012.

IAEA Fundamental Safety Principles—“Fundamental Safety Principles,” Safety Fundamentals, IAEA Safety Standards Series No. SF-1, 2006.

IAEA Safety Requirements—Refers to “Safety of Nuclear Power Plants: Design,” Specific Safety Requirements, IAEA Safety Standards Series No. SSR 2-1, 2012.

IAEA INTERNATIONAL NUCLEAR SAFETY GROUP (INSAG) REPORTS

“Key Practical Issues in Strengthening Safety Culture”—“Key Practical Issues in Strengthening Safety Culture,” Report by the IAEA International Nuclear Safety Group, INSAG-15, 2002.

“The Interface between Safety and Security at Nuclear Power Plants”—“The Interface between Safety and Security at Nuclear Power Plants,” Report by the IAEA International Safety Group, INSAG-24, 2010.

IAEA SECURITY STANDARDS

IAEA Nuclear Security Fundamentals—“Objective and Essential Elements of a State's Nuclear Security Regime”, IAEA Nuclear Security Series No. 20, 2013.

IAEA Nuclear Security Recommendations – “Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities”, INFCIRC/225/Rev5, 2011.

IAEA SAFEGUARDS

IAEA Additional Protocol—“Model Protocol Additional to the Agreement(s) between State(s) and the International Atomic Energy Agency for the application of Safeguards,” International Atomic Energy Agency, INFCIRC/540 (Corrected), September 1997.

IAEA Comprehensive Safeguards Agreement—“The Structure and Content of Agreements Between the Agency and States Required in Connection with the Treaty on the Non-proliferation of Nuclear Weapons,” International Atomic Energy Agency, INFCIRC/153 (Corrected), June 1972.

State System of Accounting for and Control of Nuclear Materials—See “Systems of Accounting for and Control of Nuclear Material,” *IAEA Bulletin* Vol. 17, no. 2, 1975.

OTHER DOCUMENTS AND INTERNATIONAL AGREEMENTS

Charter of the World Association of Nuclear Operators—September 4, 2014.

Final Document of the 2010 NPT Review Conference—NPT/CONF.2010/L.2, May 27, 2010.

Nuclear Suppliers Group Guidelines—Refers to 1.) “Guidelines for Nuclear Transfers,” Reproduced in IAEA INFCIRC/254/Part 1, as amended November 7, 2007; and 2.) “Guidelines for Transfers of Nuclear-Related Dual-Use Equipment, Materials, Software and Related Technology,” Reproduced as IAEA INFCIRC/254/ Part 2, as amended March 20, 2006.

Pertinent United Nations Security Council Resolutions—Refers to resolutions adopted by the United Nations Security Council under Chapter VII of the UN Charter that address issues relevant to nuclear non-proliferation and illicit trafficking. It includes UN Security Council resolutions S/RES/1540 (2004), S/RES/1810 (2009), S/RES/1887 (2009) and state specific resolutions such as S/RES/1718 (2006) and S/RES/1929 (2010).

Rio Declaration—Rio Declaration on Environment and Development, A/CONF.151/26 (Vol. I), adopted June 14, 1992.

Treaty on the Non-Proliferation of Nuclear Weapons (NPT)—Reproduced in IAEA INFCIRC/140, March 5, 1970.

United Nations Global Compact—“Ten Principles of the United Nations Global Compact,” 2000.

UN Security Council Resolution 1887—Adopted by the UN Security Council in S/RES/1887, September 24, 2009.

Universal Declaration of Human Rights—Adopted by the UN General Assembly in resolution A/RES/217(III) A, December 10, 1948.

WANO Principles “Traits of a Healthy Safety Culture” —PL 2013-1, May 2013

