

## 10. UNITED STATES OF AMERICA (USA)

### 10.1 Energy Policies and Actions

In May 2001, the National Energy Policy Development Group (NEPDG) developed a national energy policy to promote dependable, affordable, and environmentally sound production and distribution of energy. The NEPDG envisions a comprehensive long-term strategy that uses leading edge technology to produce an integrated energy, environmental and economic policy. It recommends (i) modernization of conservation and energy infrastructure, (ii) increase energy supplies, including renewables, (iii) acceleration of environmental protection and improvement, and (iv) increase of energy security.<sup>150</sup>

In August 2005, the first comprehensive energy bill was signed into the Energy Policy Act of 2005 (EPAct2005)<sup>151</sup>, as an attempt to combat growing energy problems, provide tax incentives and loan guarantees for various types of energy production. The provisions in the Act aim to (i) encourage energy efficiency and conservation, (ii) promote alternative and renewable energy sources, (iii) reduce the nation's dependence on foreign sources of energy, (iv) increase domestic production, (v) modernise the electricity grid, and (vi) encourage the expansion of nuclear energy.<sup>152</sup> Key provisions of the EPAct2005 are reproduced in **Exhibit US-1**.

In February 2006, the President of the United State announced the "Advanced Energy Initiative", which provides for a 22% increase in funding to develop new clean-energy technologies and alternative sources of energy so as to help diversify and strengthen the nation's energy mix. To change the way of power of homes and offices, it will invest more in zero-emission coal-fired plants, revolutionary solar and wind technologies, and clean, safe nuclear energy. To change the way of power of automobiles, it will increase the research in better batteries for hybrid and electric cars and in pollution-free cars that run on hydrogen. Besides, it will also fund additional research in cutting-edge methods of producing ethanol, not just from corn, but from wood chips, stalks, or switch grass.<sup>153</sup>

Although USA has declared not to ratify the Kyoto Protocol<sup>154</sup>, there are currently a number of initiatives at state and local levels. As of January 2007, nine Northeast and Mid-Atlantic states are involved in the Regional Greenhouse Gas Initiative (RGGI), which is a cooperative effort to discuss the design of a regional cap-and-trade programme initially covering carbon dioxide emissions from power plants in the region. In the future, RGGI may be extended to include other sources of greenhouse gas emissions, and greenhouse gases other than CO<sub>2</sub>.<sup>155</sup>

<sup>150</sup> Extracted from the full document of the "National Energy Policy - Reliable, Affordable, and Environmentally Sound Energy for American's Future", <http://www.whitehouse.gov/energy/National-Energy-Policy.pdf>

<sup>151</sup> The Energy Policy Act of 2005 can be obtained at <http://www.doi.gov/iepa/EnergyPolicyActof2005.pdf>

<sup>152</sup> Reference has been made to a fact sheet entitled "President Bush Signs Into Law a National Energy Plan" as published in the White House's website, <http://www.whitehouse.gov/news/releases/2005/08/20050808-4.html>

<sup>153</sup> Originated from the full document of the "Advanced Energy Initiative", [http://www.whitehouse.gov/stateoftheunion/2006/energy/energy\\_booklet.pdf](http://www.whitehouse.gov/stateoftheunion/2006/energy/energy_booklet.pdf)

<sup>154</sup> Source: [http://en.wikipedia.org/wiki/Energy\\_policy\\_of\\_the\\_United\\_States](http://en.wikipedia.org/wiki/Energy_policy_of_the_United_States)

<sup>155</sup> Referenced to the web site of RGGI, <http://www.rggi.org/about.htm>

**Exhibit US-1 Key Provisions of the EPAct2005**

- Authorises loan guarantees for "innovative technologies" that avoid greenhouse gases, which might include advanced nuclear reactor designs as well as clean coal and renewable energy;
- Increases the amount of biofuel (usually ethanol) that must be mixed with gasoline sold in the United States to triple the current requirement (7.5 billion gallons by 2012);
- Seeks to increase coal as an energy source while also reducing air pollution, through authorizing \$200 million annually for clean coal initiatives, repealing the current 160-acre cap on coal leases, allowing the advanced payment of royalties from coal mines and requiring an assessment of coal resources on federal lands that are not national parks;
- Authorises subsidies for wind energy, and other alternative energy producers;
- Adds ocean energy sources including wave power and tidal power for the first time as separately identified renewable technologies;
- Authorises \$50 million annually over the life of the bill for a biomass grant program;
- Contains several provisions aimed at making geothermal energy more competitive with fossil fuels in generating electricity;
- Requires the U.S. Department of Energy to study and report on existing natural energy resources including wind, solar, waves and tides;
- Requires the U.S. Department of Energy to study and report on national benefits of demand response and make a recommendation on achieving specific levels of benefits and encourages time-based pricing and other forms of demand response as a policy decision;
- Provides tax breaks for those making energy conservation improvements to their homes;
- Provides incentives to companies drilling for oil in the Gulf of Mexico;
- Extends daylight saving time by approximately four weeks;
- Requires that no drilling for gas or oil may be done in or underneath the Great Lakes;
- Requires that Federal Fleet vehicles capable of operating on alternative fuels be operated on these fuels exclusively;
- Sets federal reliability standards regulating the electrical grid;
- Nuclear-specific provisions:
  - Authorises cost-overrun support of up to \$2 billion total for up to six new nuclear power plants;
  - Authorises a production tax credit of up to \$125 million total per year, estimated at 1.8 US¢/kWh during the first eight years of operation for the first 6,000 MW of capacity;
  - Authorises \$1.25 billion for the Department of Energy to build a nuclear reactor to generate both electricity and hydrogen;
  - Allows nuclear plant employees and certain contractors to carry firearms;
  - Prohibits the sale, export or transfer of nuclear materials and "sensitive nuclear technology" to any state sponsor of terrorist activities;
  - Updates tax treatment of decommissioning funds;
  - A provision for the U.S. Department of Energy to report in one year on how to dispose of high-level nuclear waste.<sup>156</sup>

<sup>156</sup> Source: [http://en.wikipedia.org/wiki/Energy\\_Policy\\_Act\\_of\\_2005](http://en.wikipedia.org/wiki/Energy_Policy_Act_of_2005)

## 10.2 Environmental Evaluation/SEA in USA

In USA, it is a statutory requirement under the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321-4347)<sup>157</sup> that federal agencies should integrate environmental values into their decision-making processes by considering environmental impacts (positive and negative) of their major proposed actions and reasonable alternatives to those actions. Major environmental impacts must be considered before any federal actions that likely have significant effect on the environment.

Such major federal actions include:

- New/continuing activities financed, assisted, conducted, or approved by Federal agencies;
- New/revised rules, regulations, plans, policies, or procedures; and
- Legislative proposals.<sup>158</sup>

The NEPA has four primary purposes:

- to declare a national environmental policy;
- to promote efforts to protect the environment;
- to improve national understanding of environmental issues; and
- to establish the Council on Environmental Quality (CEQ), which aims to advise agencies on the environmental decision making process and to oversee and coordinate the development of Federal environmental policy.<sup>159</sup>

There are three classes of action, which determine the level of documentation required in the NEPA process.

**Categorical Exclusion (CE):** a category of action established by Federal agencies that do not individually or cumulatively have significant effects on the environment.

**Environmental Assessment (EA):** provides evidence/analysis for determining whether the action will cause significant impacts. When it is determined that there will be no significant impacts as a result of the proposed action, an EA fulfills the agency's compliance with NEPA. If it is determined that there will be significant (positive and/or negative) impacts, an EA facilitates preparation of an Environmental Impact Statement. A Finding of No Significant Impact (FONSI) is prepared after the EA is completed and a determination of no significant impacts has been made. A FONSI is a decision document supporting a determination that an action will not result in significant impacts. The FONSI is often included in the Environmental Assessment, but may be a separate document that includes a summary of the EA.

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<sup>157</sup> More information can be found in this link, <http://ceq.eh.doe.gov/Nepa/regs/nepa/nepaeqia.htm>, originated from the web site of the Council on Environmental Quality

<sup>158</sup> Extracted from NEPA Informational Guide by the National Marine Fisheries Service Northeast Regional Office, [http://www.nero.noaa.gov/prot\\_res/atgtrp/osm/NEPA%20Overview.pdf](http://www.nero.noaa.gov/prot_res/atgtrp/osm/NEPA%20Overview.pdf), page 1

<sup>159</sup> Reference has been made to the web site of Minerals Management Services (MMS), a bureau in the U.S. Department of the Interior - the Federal agency that manages the nation's natural gas, oil and other resources on the outer continental shelf, <http://www.mms.gov/eppd/compliance/nepa/index.htm>

*Environmental Impact Statement (EIS):* To comply with NEPA, federal agencies must prepare a detailed statement known as “Environmental Impact Statement” (EIS) on the environmental impacts of any federal action significantly affecting the quality of the human environment. Before that, a Notice of Intent (NOI) is prepared to announce an agency’s decision for the preparation of an EIS for a particular action and must be published in the Federal Register.<sup>160</sup>

NEPA requires that an EIS must include:

- the environmental impacts of the proposed action; unavoidable adverse environmental impacts;
- alternatives including no action;
- the relationship between short term uses of the environment and maintenance of long-term ecological productivity; irreversible and irretrievable commitments of resources; and
- secondary/cumulative effects of implementing the proposed action.

A Draft EIS is firstly prepared to evaluate the impacts of the action and reasonable alternatives. A final EIS is then prepared to respond to comments, including any project changes.

Following the Final EIS, a Record of Decision (ROD) is prepared for the following functions: (i) state the final decision; (ii) identify alternatives considered and specify those that are environmental preferable; (iii) state whether all practicable mitigation measures were adopted, and if not, explain why; and (iv) commit to a monitoring and enforcement program to insure implementation of mitigation measures.<sup>161</sup>

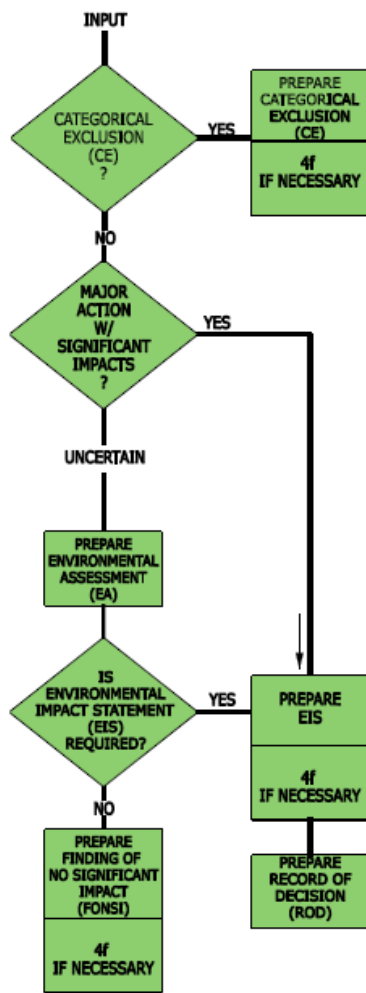
The overall process for NEPA and EIS are presented in **Exhibit US-2**.

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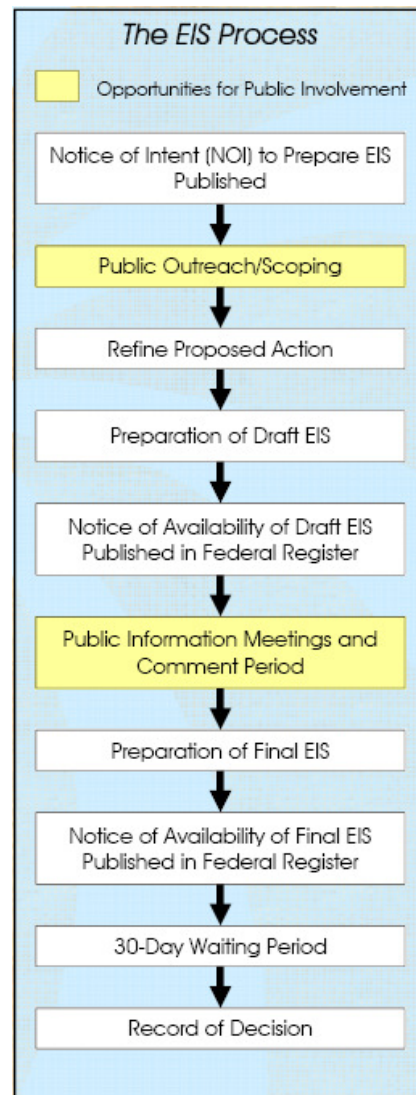
<sup>160</sup> Extracted from NEPA Informational Guide by the National marine Fisheries Service Northeast Regional Office, [http://www.nero.noaa.gov/prot\\_res/atgtrp/osm/NEPA%20Overview.pdf](http://www.nero.noaa.gov/prot_res/atgtrp/osm/NEPA%20Overview.pdf)

<sup>161</sup> Extracted from NEPA Informational Guide by the National Marine Fisheries Service Northeast Regional Office, [http://www.nero.noaa.gov/prot\\_res/atgtrp/osm/NEPA%20Overview.pdf](http://www.nero.noaa.gov/prot_res/atgtrp/osm/NEPA%20Overview.pdf)

**Exhibit US-2 Process flow chart for the overall process of NEPA and EIS**



Overall process for NEPA <sup>162</sup>



Overall process for EIS <sup>163</sup>

<sup>162</sup> Extracted from the “Western Federal Lands Highway Division Project Development Process Flow Chart” by the Department of Transportation, USA, [http://www.wfl.fhwa.dot.gov/design/process/pdf/process\\_flowchart.pdf](http://www.wfl.fhwa.dot.gov/design/process/pdf/process_flowchart.pdf), page 7

<sup>163</sup> Extracted from a fact sheet regarding NEPA/EIS by the National Oceanic and Atmospheric Administration (NOAA) – an agency of the US Department of Commerce, [http://www.nmfs.noaa.gov/pr/pdfs/health/nepa\\_eis\\_facts.pdf#search=%22NEPA%20EIS%20public%20%22](http://www.nmfs.noaa.gov/pr/pdfs/health/nepa_eis_facts.pdf#search=%22NEPA%20EIS%20public%20%22)

### 10.3 Environmental Evaluation/SEA for Energy Policies and Actions in USA

**Energy-related policy, plan or programme** also follows the requirements of NEPA as such an environmental evaluation should be carried out and involves the preparation of CE, EA or EIS depending on the impact significance. Details of the NEPA requirements can be referred to Section 10.2.

According to the Department of Energy (DOE) NEPA Regulations (10 CFR Part 1021), it states that the DOE shall use to comply with the NEPA and the CEQ regulations for implementing the procedural provisions of NEPA, and apply the NEPA review process early in the planning stages for DOE proposals.<sup>164</sup>

In this regard, the DOE has implemented the NEPA program, which enables the timely implementation of the Department's proposed activities by providing technical leadership and support needed to assure compliance with NEPA and related environmental review requirements. The goal of the NEPA program is to foster sound departmental planning and decision making and to build public trust through effective process implementation. NEPA program objectives include ensuring the timely and adequate completion of NEPA reviews. Another objective is to streamline the environmental review so that the process works better, costs less, and is more useful to decision makers and the public.<sup>165</sup>

The DOE offers the NEPA web site which provides information regarding DOE NEPA-related activities, including public involvement opportunities. The NEPA web contains NEPA-related resources, including full-text searchable DOE NEPA documents, NEPA and related requirements and NEPA guidance, status and schedules of DOE NEPA documents.<sup>166</sup>

The DOE has also prepared the National Environmental Policy Act Compliance Guide to assist its NEPA practitioners. It provides not only the laws, executive orders, regulations and policies regarding NEPA, but also the guidance on NEPA documents preparation such as DOE EIS checklist so as to provide cost and time saving benefits in the preparation and review of DOE EIS.<sup>167</sup>

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<sup>164</sup> Reference has been made to the NEPA Implementing Procedures (10 CFR Part 1021), [http://www.eh.doe.gov/NEPA/tools/REGULATE/NEPA\\_REG/1021/nepa1021\\_rev.pdf](http://www.eh.doe.gov/NEPA/tools/REGULATE/NEPA_REG/1021/nepa1021_rev.pdf)

<sup>165</sup> Extracted from the web site of Department of Energy, <http://www.energy.gov/environment/nepa.htm>

<sup>166</sup> Extracted from the DOE NEPA web, <http://www.eh.doe.gov/nepa/>

<sup>167</sup> Reference has been made to the DOE NEPA Compliance Guide, <http://www.eh.doe.gov/nepa/guidance.html>

A summary table for the energy policies and actions and SEA status in USA is presented in Exhibit US-3.

<b>Exhibit US-3 Summary of Energy Policies and Actions and SEA Status in USA</b>	
<b>(a) Energy Policies and Actions</b>	
<b>Energy Policies and Actions</b>	Policies: <ul style="list-style-type: none"> <li>● Energy Policy Act 2005</li> <li>● Advanced Energy Initiative</li> </ul> Actions: <ul style="list-style-type: none"> <li>● Regional Greenhouse Gas Initiative</li> </ul>
<b>Guidance/Legislations for Energy</b>	Energy Policy Act 2005
<b>(b) Environmental Evaluations / SEA Status in Energy Policies and Actions</b>	
<b>Type of Assessment</b>	Environmental Impact Statement
<b>Requirement Mechanisms</b>	Statutory
<b>Legislation for Environmental Evaluation / SEA</b>	National Environmental Policy Act (NEPA)
<b>Applications</b>	Policies, Plans and Programmes



Nuclear power plant<sup>168</sup>



A windfarm at the California Central Valley<sup>169</sup>

<sup>168</sup> Source: <http://www.whitehouse.gov/stateoftheunion/2006/energy/index.html>

<sup>169</sup> Source: [http://en.wikipedia.org/wiki/Energy\\_policy\\_of\\_the\\_United\\_States](http://en.wikipedia.org/wiki/Energy_policy_of_the_United_States)

## 10.4 Analysis and Conclusions

In USA, the National Energy Policy Development Group is responsible to develop energy policy for the nation. The policy focuses on recommendation of mainly modernising and conserving energy. On the other hand, in order to confront the increase energy usage problem, comprehensive energy bill was signed into the EPAct2005. It aims to provide tax incentives and loan guarantees for various types of energy production. The government of USA also encourages the development of new clean-energy technologies and alternative sources of energy so as to help diversify and strengthen the nation's energy mix. In addition, nine Northeast and Mid-Atlantic states are involved in the Regional Greenhouse Gas Initiative in order to give effort to tackle the problems covering greenhouse gas emissions.

For the energy situation of Hong Kong, the energy policy focuses on providing reliable supplies of energy at reasonable prices, promoting its economical and safe use, and at the same time minimising the environmental impacts in the production and use of energy. The Hong Kong government also supports the development of renewable energy. The government has set up the Energy Efficiency Office to promote to the public the information on renewable energy technologies, so as to facilitate the wider adoption of such technologies in Hong Kong. It would be beneficial for Hong Kong by referencing other countries, e.g. USA, to continuously research and develop new forms of energy and study their applicability in Hong Kong. Such actions would probably improve its air quality and the emission of greenhouse gases would be minimised.

While the energy policy in USA focuses on modernising and conserving energy, the Hong Kong government has also identified the promotion of energy efficiency and conservation as one of the measures to achieve its energy policy objectives. The energy efficiency and conservation policy adopted in Hong Kong include the development of standards and guidelines, and the implementation of different programmes to promote energy saving, such as the Energy Efficiency Labelling Scheme, Building Energy Codes and Energy Efficiency Registration Scheme for Buildings, Water-cooled Air Conditioning System, Hong Kong Energy End-use Data, Energy Consumption Indicators and Benchmarks, etc.

With regard to the requirements of the Environmental Evaluation/SEA in USA, all the decision for any federal actions with impacts on the environment shall be governed under NEPA for all energy-related activities in USA in energy production, distribution and consumption.

Under the NEPA requirement, there are 3 types of environmental related reports that are required to be prepared by responsible authorities during planning of any policy, plan or programme depending on the impact significance, they are:

- Categorical Exclusions - refers to those do not involve significant social, economic or environmental impacts.
- Environmental Assessment - it is prepared when the environmental impact are not clear to define.
- Environmental Impact Statement - it is prepared for any major federal action that may significantly affect the environment.



The above 3 kinds of reports cover all significance, from minor to severe, which makes the assessment more comprehensive.

In view of the concerns on global warming, it is becoming more important to carry out prior environmental assessments for any policy, plan and programme regarding energy production, distribution and consumption, in order to protect the world's environment. The USA's NEPA process would be a good reference to Hong Kong for carrying out environmental assessment when proposing policies, plans and programmes for all sectors. It would save cost and time to prepare and review different levels of documentations depending on the impact significance.

## 10.5 Examples of Energy Policies/Actions or their Environmental Evaluation/SEA

<b>Example US-1 Wind Energy Final Programmatic Environmental Impact Statement (PEIS) (2005)<sup>170</sup></b>	
<b>Type of Study</b>	Environmental Impact Statement (Required statutorily under NEPA)
<b>Description of Study</b>	The Bureau of Land Management (BLM) proposes to revise the Interim Wind Energy Development Policy through the development of a Wind Energy Development Program to support wind energy development on public lands, and to amend selected BLM land use plans. The objectives of this PEIS are to (1) assess the environmental, social and economic impacts associated with wind energy development on BLM-administered land; and (2) evaluate a number of alternatives to address the question of whether the “proposed action” presents the best management approach for the BLM to adopt, in terms of mitigating potential impacts and facilitating wind energy development.
<b>Summary of Alternatives</b>	The alternatives considered in the study include: <ul style="list-style-type: none"> <li>• Proposed Action – implement a Wind Energy Development Program</li> <li>• No action alternative</li> <li>• Limited wind energy development alternative – allow additional wind energy development on BLM-administered land only in areas where it currently exists, is under review, or has been approved for development</li> </ul>
<b>Scope of Assessment/ Study</b>	The evaluation parameters considered in the study include: <ul style="list-style-type: none"> <li>• Geologic Resources</li> <li>• Water Resources</li> <li>• Air Quality</li> <li>• Noise</li> <li>• Ecological Resources</li> <li>• Land Use</li> <li>• Visual Resources</li> <li>• Hazardous Materials and Waste Management</li> <li>• Transportation</li> <li>• Human Health and Safety</li> <li>• Paleontological / Cultural Resources</li> <li>• Economics</li> <li>• Social</li> </ul>
<b>Environmental Measures</b>	Effective mitigation measures can be implemented to address many of the direct and indirect adverse impacts that could occur. For some resources, minimum requirements can be established that would effectively mitigate impacts at all potential development sites. For other resources, however, such as ecological and visual resources, mitigation will be better defined at the project level to address site-specific concerns.
<b>Outcome of Study</b>	<ul style="list-style-type: none"> <li>• On the basis of the impact analyses presented in this PEIS, it appears that the Proposed Action (i.e. Alternative 1) would present the best approach for managing wind energy development on BLM-administered lands, which best meets the objectives of the National Energy Policy recommendations to increase renewable energy production on federal lands.</li> <li>• The Proposed Action with Wind Energy Development Program (i.e. Alternative 1) is likely to result in the greatest amount of wind energy development over the next 20 years, at the lowest potential cost to industry.</li> </ul>

<sup>170</sup> Full report: <http://windeis.anl.gov/documents/fpeis/index.cfm> Texts in the table are extracted from <http://windeis.anl.gov/documents/fpeis/maintext/Vol1/Vol1ExecSum.pdf>, pages ES1, 4, 5, 8, 9 & from <http://windeis.anl.gov/documents/fpeis/maintext/Vol1/Vol1Ch2.pdf>, pages 2-2 to 2-5, 2-31, 2-33

<b>Example US-1 Wind Energy Final Programmatic Environmental Impact Statement (PEIS) (2005)<sup>170</sup></b>	
	<ul style="list-style-type: none"> <li>• The Proposed Action (i.e. Alternative 1) would provide the most comprehensive approach for ensuring that potential adverse impacts are minimised to the greatest extent possible.</li> <li>• The Proposed Action (i.e. Alternative 1) is likely to provide the greatest economic benefits to local communities and the region as a whole.</li> </ul>

<b>Example US-2 Draft Environmental Impact Statement for the Proposed Consolidation of Nuclear Operations Related to Production of Radioisotope Power System<sup>171</sup></b>	
<b>Type of Study</b>	Environmental Impact Statement (Required statutorily under NEPA)
<b>Description of Study</b>	The Department of Energy (DOE) and its predecessor agencies have been producing radioisotope power systems (RPSs) for Government national security and space exploration missions. RPSs are reliable, maintenance free and capable of producing heat or electricity for decades. Currently, DOE RPS production operations exist or are planned to exist at three geographically separate and distant sites. DOE is now proposing to consolidate RPS nuclear production operations at a single site. This Consolidation EIS aims to evaluate the potential direct, indirect and cumulative environmental impacts associated with each of the alternatives.
<b>Summary of Alternatives</b>	<p>The alternatives considered in the study include:</p> <ul style="list-style-type: none"> <li>• No Action Alternative – RPS production operations to exist at separate sites</li> <li>• Consolidation Alternative (Preferred Alternative) – consolidate all RPS nuclear production operations within the secure area at the Materials and Fuel Complex (MFC) at Idaho National Laboratory (INL)</li> <li>• Consolidation with Bridge Alternative – use existing facilities for the production of plutonium-238 during the time period (“Bridge period”) required for the new facilities at INL to become operational</li> </ul>
<b>Scope of Assessment/ Study</b>	<p>The evaluation parameters considered in the study include:</p> <ul style="list-style-type: none"> <li>• Land resources</li> <li>• Site infrastructure</li> <li>• Geology and soils</li> <li>• Water resources and floodplain</li> <li>• Air quality and Noise</li> <li>• Ecological resources</li> <li>• Socioeconomics</li> <li>• Public health and safety</li> <li>• Waste management</li> <li>• Transportation</li> </ul>
<b>Environmental Measures</b>	<ul style="list-style-type: none"> <li>• Adhere to standard best management practices for soil erosion and sediment control during construction to minimise wind and water erosion</li> <li>• Reuse topsoil removed during construction for backfill of facility excavations</li> <li>• Water roadways and revegetate exposed areas to reduce dust emissions resulting from use of heavy equipment</li> <li>• Continue to implement the “as low as is reasonably achievable” (ALARA) principle during construction and operation to reduce radiological exposure of workers</li> <li>• Continue safety training to help protect workers and prepare for possible</li> </ul>

<sup>171</sup> [http://consolidationeis.doe.gov/pdfs/DOE\\_EIS\\_0373D/summary.pdf](http://consolidationeis.doe.gov/pdfs/DOE_EIS_0373D/summary.pdf), Page iii,S-9,S-12,S-41,S-51

<b>Example US-2 Draft Environmental Impact Statement for the Proposed Consolidation of Nuclear Operations Related to Production of Radioisotope Power System<sup>171</sup></b>	
	<p>emergencies and accidents</p> <ul style="list-style-type: none"> <li>● Continue to perform cultural and biological surveys prior to and during construction.</li> <li>● Provide physical improvements to local and onsite roads to increase capacity and reduce traffic volume impacts</li> <li>● Provide programs for employees that include flexible hours or staggered work shifts for workers to reduce peak traffic volumes</li> <li>● Continue implementing DOE's pollution prevention and waste minimisation awareness program</li> </ul>
<b>Outcome of Study</b>	<ul style="list-style-type: none"> <li>● Transportation impacts would be higher under the No Action Alternative than under the Consolidation or Consolidation with Bridge Alternatives, primarily due to no interstate transportation being required for new plutonium-238 production after the consolidation of nuclear operations at INL.</li> <li>● Consolidated nuclear operations at INL would result in the lowest radiological risk to the public during normal operations and from accidents and to workers from accidents; nuclear operations at ORNL under the No Action Alternative would have the highest radiological risk of the three alternatives to the public during normal operations and from accidents.</li> <li>● Construction of new RPS nuclear production facilities and a new road at INL would have an impact on land, water, air quality, ecological, and cultural resources under the Consolidation and Consolidation with Bridge Alternatives. Depending on the chosen routing, impacts to the Big Lost River floodplain could also occur.</li> <li>● Operations impacts would be very small under each alternative, including radiological impacts to workers during normal operations, as well as air quality and noise impacts, socioeconomics impacts, public health and safety impacts from radiological and chemical accidents, environmental justice impacts, or cumulative impacts.</li> </ul>