

Section 232 National Security Investigation: The Effect of Imports of Uranium on the National Security

Nuclear Power Operator Survey



SCOPE OF ASSESSMENT

The U.S. Department of Commerce, Bureau of Industry and Security (BIS), Office of Technology Evaluation (OTE), is conducting a survey of the U.S. nuclear power operator and end-user sector. The survey results will be used to support an ongoing investigation of the effect of imports of uranium on the national security initiated under Section 232 of the Trade Expansion Act of 1962, as amended.

The principal goal of this survey is to assist the U.S. Department of Commerce in determining whether uranium is being imported into the United States in such quantities or under such circumstances as to threaten to impair the national security. Information collected will include facilities and production data, mergers and acquisitions, joint ventures, trade flows, supply chain networks, sales and demand data, employment information, conditions of domestic and global competition, research and development, and other financial factors. The resulting data will provide the U.S. Department of Commerce detailed uranium industry information that is otherwise not publicly available and needed to effectively conduct this Section 232 investigation.

RESPONSE TO THIS SURVEY IS REQUIRED BY LAW

A response to this survey is required by law (50 U.S.C. Sec. 4555). Failure to respond can result in a maximum fine of \$10,000, imprisonment of up to one year, or both. Information furnished herewith is deemed confidential and will not be published or disclosed except in accordance with Section 705 of the Defense Production Act of 1950, as amended (50 U.S.C. Sec. 4555). Section 705 prohibits the publication or disclosure of this information unless the President determines that its withholding is contrary to the national defense. Information will not be shared with any non-government entity, other than in aggregate form. The information will be protected pursuant to the appropriate exemptions from disclosure under the Freedom of Information Act (FOIA), should it be the subject of a FOIA request.

Notwithstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number.

BURDEN ESTIMATE AND REQUEST FOR COMMENT

Public reporting burden for this collection of information is estimated to average 14 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information to BIS Information Collection Officer, Room 6883, Bureau of Industry and Security, U.S. Department of Commerce, Washington, D.C. 20230, and to the Office of Management and Budget, Paperwork Reduction Project (OMB Control No. 0694-0120), Washington, D.C. 20503.

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General Instructions

A.	<p>Your organization is required to complete this survey of the U.S. nuclear power generation sectors using an Excel template, which can be downloaded from the BIS website: http://www.bis.doc.gov/nuclearoperator</p> <p>If you are unable to download the survey document, at your request, BIS survey support staff will e-mail the Excel survey template directly to you.</p> <p>For your convenience, a PDF version of the survey and required drop-down content is available on the BIS website to aid internal data collection. DO NOT SUBMIT the PDF version of the survey as your response to BIS. Should this occur, your organization will be required to resubmit the survey in the requested Excel format.</p>
B.	<p>Respond to every question. Surveys that are not fully completed will be returned for completion. Use the comment boxes to provide any information to supplement responses provided in the survey form. Make sure to record a complete answer in the cell provided, even if the cell does not appear to expand to fit all of the information.</p> <p>DO NOT CUT AND PASTE RESPONSES WITHIN THIS SURVEY OR PASTE IN RESPONSES FROM OUTSIDE THE SURVEY. Survey inputs should be completed by typing in responses or by using a drop-down menu. The use of cut and paste can corrupt the survey template. If your survey response is corrupted as a result of cut and paste responses, your survey will be rejected and your organization must immediately resubmit the survey.</p>
D.	<p>Do not disclose any USG classified information in this survey form.</p>
E.	<p>Upon completion of the survey, final review, and certification, transmit the survey document via e-mail to: Uranium232@bis.doc.gov</p>
F.	<p>Questions related to the survey should be directed to BIS survey support staff at Uranium232@bis.doc.gov</p> <p>E-mail is the preferred method of contact.</p> <p>You may also speak with a member of the BIS survey support staff by calling (202) 482-3800.</p>
G.	<p>For questions related to the overall scope of this Section 232 Investigation, contact Uranium232@bis.doc.gov or:</p> <p>Brad Botwin, Director, Industrial Studies Office of Technology Evaluation, Bureau of Industry and Security, Room 1093 U.S. Department of Commerce 1401 Constitution Avenue, NW Washington, DC 20230</p> <p>DO NOT submit completed surveys to Mr. Botwin's postal or personal e-mail address. All surveys must be submitted electronically to: Uranium232@bis.doc.gov</p>

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Definitions

Term	Definition
Applied Research	A systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met. This activity includes work leading to the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes.
Authorizing Official	An executive officer of the organization or business unit or another individual who has the authority to execute this survey on behalf of the organization.
Basic Research	A systematic, scientific study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts.
Boiling Water Reactor (BWR)	A common nuclear power reactor design in which water flows upward through the core, where it is heated by fission and allowed to boil in the reactor vessel. The resulting steam drives turbines, which activate generators to produce electrical power.
Capital Expenditures	Investments made by an organization in buildings, equipment, property, and systems where the expense is depreciated. This does not include expenditures for consumable materials, other operating expenses, and salaries associated with normal business operations.
Customer	Any organization (external or internal entity) for which your organization manufactures/processes any product comprised of, or containing, uranium in any form.
Defense-related Activities	Any product or service that your organization produces that is ultimately used by the U.S. government for defense purposes, whether by the armed services, the Department of Defense, or any other U.S. government entity.
Depleted Uranium	Uranium in which the percentage fraction by weight of U-235 is less than 0.711 percent.
Development	The design, simulation, and testing of a prototype, including experimental software or hardware systems, to validate technological feasibility or concept of operation in order to reduce technological risk, or provide test systems prior to production approval.
Enriched Uranium	Includes enriched uranium oxide, enriched uranium hexafluoride, and other enriched uranium. Uranium enriched in U-235 and its compounds: alloys, dispersions (including cermets), ceramic products, and mixtures containing uranium enriched in U-235.
Exports	Shipments to destinations outside the United States, including shipments to Canada and Mexico.
Facility	A building or the minimum complex of buildings or parts of buildings in which an organization operates to serve a particular function, producing revenue, and incurring costs for the company. A facility may produce an item of tangible or intangible property or may perform a service. It may encompass a floor or group of floors within a building, a single building, or a group of buildings or structures. Often, a facility is a group of related locations at which organization employees work, together constituting a profit-and-loss center for the company, and it may be identified by a unique DUNS number.
Foreign Corrupt Practices Act of 1977 (FCPA) U.S.C. §§ 78dd-1	The Foreign Corrupt Practices Act (FCPA), enacted in 1977, generally prohibits the payment of bribes to foreign officials to assist in obtaining or retaining business. The FCPA can apply to prohibited conduct anywhere in the world and extends to publicly traded companies and their officers, directors, employees, stockholders, and agents. Agents can include third party agents, consultants, distributors, joint-venture partners, and others.
Fuel Assemblies	A structured group of fuel rods (long, slender, metal tubes containing pellets of fissionable material, which provide fuel for nuclear reactors).
Fuel Elements	Includes fuel rods or fuel pellets, non-irradiated, and other parts thereof.
Fuel Fabrication	Fuel fabrication is the last step in the process of turning uranium into nuclear fuel rods, whereby enriched UF ₆ is converted to uranium dioxide powder that is pressed into pellets and inserted into fuel rods, grouped together to form fuel assemblies.

Full Time Equivalent (FTE) Employees	Employees who work for 40 hours in a normal work week. Convert part-time employees into "full time equivalents" by taking their work hours as a fraction of 40 hours.
Global Headquarters	A location that serves as the organization's hub of worldwide operations with all global branches or divisions reporting to it.
Harmonized Tariff Schedule (HTS)	A 10-digit numbering system that classifies a good based on its name, use, and/or the material used in its construction. The number provides Customs and Border Protection (CBP) with a standardized method of tracking all merchandise imported into the United States and sets out the tariff rates and statistical categories.
Import Value	Values reported should be landed, duty paid values at the U.S. port of entry, including ocean freight and insurance costs, brokerage charges, and import duties (i.e., all charges except inland freight in the United States).
Inventory	The goods or materials an organization holds for its own use or for the ultimate goal of sale, or disposition or future conversion, enrichment, fabrication, or other use. This is material to which your organization has title; this does not include holding material for third-party use or storage.
Natural Uranium	Uranium with the same isotopic ratio as found in nature. This includes uranium ore and concentrates (U3O8) and natural uranium hexafluoride (UF6).
Non-U.S. Facility	A facility that is physically located outside of the United States.
Organization	A company, firm, laboratory, or other entity that owns or controls one or more U.S. establishment) or facility capable of designing and/or manufacturing products in the nuclear power generation sector.
Pressurized Water Reactor (PWR)	A common nuclear power reactor design in which very pure water is heated to a very high temperature by fission, kept under high pressure (to prevent it from boiling), and converted to steam by a steam generator. The resulting steam is used to drive turbines, which activate generators to produce electrical power.
Product/Process Development	Conceptualization and development of a uranium or nuclear fuel-related product or system prior to the production of the product for customers (i.e., utilities, governmental agencies etc.).
Production	The process of transforming inputs (raw materials, semi-finished goods, subassemblies, ideas, information, knowledge) into goods or services.
Research & Development	Basic and applied research in the engineering sciences, as well as design and development of prototype products and processes. Efforts that an organization conducts towards innovating, introducing and/or improving products and processes.
Russian Suspension Agreement	On October 16, 1992, the Department of Commerce suspended the antidumping duty investigations involving uranium imports from Russia on the basis of agreements by the country's government to restrict the volume of direct or indirect exports to the United States in order to prevent the suppression or undercutting of price levels of United States domestic uranium. The agreement expires in 2020.
Sales	All reported and unreported sales of uranium (natural, converted, enriched and/or fabricated), including sales to end-users, producers, conversion facilities, enrichers, financial entities, intermediaries, traders, distributors, et al.
Separative Work Unit (SWU)	The standard measure of enrichment services.
Spot Contract	Contracts with a one-time uranium delivery (usually) for the entire contract, and the delivery typically occurs within one year of contract execution (signed date).

Supplier	An entity from which your organization obtains inputs, which may be goods or services. A supplier may be another organization with which you have a contractual relationship, or it may be another facility owned by the same parent organization.
Term Contract	Long-term contracts are contracts with one or more uranium deliveries to occur after a year following the contract execution (signed date) and as such may reflect some agreements of short and medium terms as well as longer term.
U.S. Department of Energy Uranium Transfer Program	The exchange of natural, enriched, or depleted uranium "tails," or uranium enrichment services between the U.S. Department of Energy and another party.
United States	The "United States" or "U.S." includes the 50 states, Puerto Rico, the District of Columbia, Guam, the Trust Territories, and the U.S. Virgin Islands.
Uranium Compounds	Includes uranium oxide, uranium hexafluoride, and other uranium compounds.
Uranium Concentrate	The end product of the mining and milling stage, in which uranium oxide concentrate (U ₃ O ₈) is produced.
Uranium Conversion	The process whereby natural uranium in the form of an oxide is converted to uranium hexafluoride.
Uranium Metal (Natural)	A lustrous silver-white metal that is radioactive, malleable, ductile, and softer than steel. It contains an isotopic ratio of 99.27% U-238, 0.72 % U-235, and 0.0055 % U-234 by weight.
Uranium Metal (Depleted)	A byproduct of enrichment (tailings) or fission, DU has less than one-third of the concentration of U-235 and U-234 by weight. DU from fission (i.e., in reprocessed used nuclear fuel) is distinct because it also contains U-236.
Uranium Mill	A plant where uranium is separated from ore taken from mines, including both conventional mills and in situ recovery (ISR) plants.
Uranium Ore	Ore which contains uranium that has been obtained from conventional or in situ mining methods.
10 CFR § 40.42	Title and section of the U.S. Code of Federal Regulations that cover the Nuclear Regulatory Commission's (NRC) regulation for the expiration and termination of licenses and decommissioning of sites and separate buildings or outdoor areas.
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1: Organization Information

Provide the following information for your organization						
A.	Organization Name					
	Street Address					
	City					
	State					
	ZIP Code					
	Location of Global Headquarters					
	U.S. Point of Contact Name					
	U.S. Point of Contact Email					
	U.S. Point of Contact Phone					
Is this organization owned, in whole or in part, by any private or government entity? Indicate Yes/No, then identify the entities below, if applicable. List entities with at least 5% ownership.						
B.	Entity Name	Global Headquarters Street Address	Global Headquarters City	Global Headquarters State/Province	Global Headquarters Country	Ownership %
At the global headquarters level, identify the total number of nuclear power generation facilities that your organization currently operates inside and outside the U.S.						
C.	Activity	Number of U.S. Facilities		Number of Non-U.S. Facilities		
	Nuclear Power Generation					
	Research & Development					
	Other	(specify)				
Comments:						
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2: Mergers, Acquisitions, Divestitures, and Joint Ventures

From 2014 - 2018, record the total number of mergers, acquisitions, and divestitures related to *nuclear power generation* in which your organization participated.

	Organization or Partnership Entity Name	Type of Activity	% of Shares Held by Partner Organization	Country Headquarters	Year Initiated	Primary Work Scope	Primary Purpose of Relationship	Explain
A 1								
2								
3								
4								
5								
6								
7								
8								
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10								
11								
12								
13								
14								
15								

From 2014 - 2018, record the total number of joint ventures and other business partnerships related to *nuclear power generation and nuclear power generation R&D*, including public/private partnerships, in which your organization participated.

	Organization or Partnership Entity Name	Type of Partnership	% of Shares Held by Partner Organization	Country Headquarters	Year Initiated	Primary Work Scope	Primary Purpose of Relationship	Explain
B 1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

From 2014 - 2018, record the total number of joint ventures and other business partnerships related to uranium production (front end nuclear fuel cycle), including public/private partnerships, in which your organization participated.							
Organization or Partnership Entity Name	Type of Partnership	% of Shares Held by Partner Organization	Country Headquarters	Year Initiated	Primary Work Scope	Primary Purpose of Relationship	Explain
1							
2							
3							
4							
5							
6							
7							
8							
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10							
11							
12							
13							
14							
15							
Comments:							
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3a: Facility Information
U.S. Facilities

Identify the total number of facilities that your organization owns in the United States involved in the generation of nuclear power.

List your organization's nuclear power generation facilities located in the United States, identifying each facility's name, city, state, operating status, reactor information, and any expected change in operations (e.g. expansion, worker layoffs, shutdown, etc.) from 2019-2023. If the facility operated in 2018, report the 2018 production volume in megawatt-hours (MWh). Even if a facility is closed, fill out all information possible.

U.S. Facility Name	City	State	Operating Status	Merchant vs. Regulated	Amount of Reactors	2018 Total Production Volume (MWh)	Amount of U308 needed to run facility per year (Pounds)	Reactor Unit No.	Status of Reactor	Reactor Type	Reactor Vendor	Number of Current Active Fuel Assembly Suppliers	Number of Fuel Assemblies Required to Operate Per Year	Licensed MWe	Expected Change 2019-2023	Explanation of Change, if Applicable
1															Closure Significant Modernization Expansion None	
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

If any of your U.S. facilities are scheduled to close or may close in the 2019-2023 period, explain the circumstances of this action.

Non-U.S. Facilities

Identify the total number of facilities that your organization owns outside the United States involved in the generation of nuclear power.

List your organization's nuclear power generation facilities located outside the United States, identifying each facility's name, city, state, operating status, reactor information, and any expected change in operations (e.g. expansion, worker layoffs, shutdown, etc.) from 2019-2023. If the facility was operating, report the 2018 production volume in megawatt-hours (MWh). Even if a facility is closed, fill out all information possible.

Non-U.S. Facility Name	City	Country	Operating Status	Merchant vs. Regulated	Amount of Reactors	2018 Total Production Volume (MWh)	Amount of U308 needed to run facility per year (Pounds)	Reactor Unit No.	Status of Reactor	Reactor Type	Reactor Vendor	Number of Current Active Fuel Assembly Suppliers	Number of Fuel Assemblies Required to Operate	Licensed MWe	Expected Change 2019-2023	Explanation of Change, if Applicable
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

If any of your non-U.S. facilities are scheduled to close or may close in the 2019-2023 period, explain the circumstances of this action.

3b: Facility Inventory

Provide all U.S. and non-U.S. inventories held directly or indirectly by you for the 2014 to 2018 period, current as of 12/31/2018.

U.S. Facilities

For any facility in the U.S., whether that facility is owned by you or another organization, indicate which forms of uranium your organization keeps in inventory, and the amounts of each in inventory for the 2014 to 2018 period, utilizing the measurements provided in parentheses.

U.S. Facility Name	Facility Owner	Operating Status	Types of Uranium in Inventory	2014	2015	2016	2017	2018
1			Uranium Ore and Concentrates (Pounds U3O8)	Yes/No				
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)					
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Fuel Assemblies (Finished Units)					
2			Uranium Ore and Concentrates (Pounds U3O8)					
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)					
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Fuel Assemblies (Finished Units)					
3			Uranium Ore and Concentrates (Pounds U3O8)					
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)					
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Fuel Assemblies (Finished Units)					
4			Uranium Ore and Concentrates (Pounds U3O8)					
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)					
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Fuel Assemblies (Finished Units)					
5			Uranium Ore and Concentrates (Pounds U3O8)					
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)					
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Fuel Assemblies (Finished Units)					
6			Uranium Ore and Concentrates (Pounds U3O8)					
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)					
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Fuel Assemblies (Finished Units)					
7			Uranium Ore and Concentrates (Pounds U3O8)					
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)					
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Fuel Assemblies (Finished Units)					
8			Uranium Ore and Concentrates (Pounds U3O8)					
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)					
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Fuel Assemblies (Finished Units)					
9			Uranium Ore and Concentrates (Pounds U3O8)					
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)					
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Fuel Assemblies (Finished Units)					
10			Uranium Ore and Concentrates (Pounds U3O8)					
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)					
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)					
			Fuel Assemblies (Finished Units)					

11		Uranium Ore and Concentrates (Pounds U3O8)						
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)						
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)						
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)						
		Fuel Assemblies (Finished Units)						
12		Uranium Ore and Concentrates (Pounds U3O8)						
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)						
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)						
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)						
		Fuel Assemblies (Finished Units)						
13		Uranium Ore and Concentrates (Pounds U3O8)						
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)						
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)						
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)						
		Fuel Assemblies (Finished Units)						
14		Uranium Ore and Concentrates (Pounds U3O8)						
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)						
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)						
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)						
		Fuel Assemblies (Finished Units)						
15		Uranium Ore and Concentrates (Pounds U3O8)						
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)						
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)						
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)						
		Fuel Assemblies (Finished Units)						

Non-U.S. Facilities

For each non-U.S. location, whether that facility is owned by you or another organization, indicate which forms of uranium your organization keeps in inventory, and the amounts of each in inventory for the 2014 to 2018 period, utilizing the measurements provided in parentheses.

	Non-U.S. Facility Location	Operating Status	Types of Uranium in Inventory	Yes/No	2014	2015	2016	2017	2018
1			Uranium Ore and Concentrates (Pounds U3O8)						
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)						
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)						
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)						
			Fuel Assemblies (Finished Units)						
2			Uranium Ore and Concentrates (Pounds U3O8)						
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)						
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)						
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)						
			Fuel Assemblies (Finished Units)						
3			Uranium Ore and Concentrates (Pounds U3O8)						
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)						
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)						
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)						
			Fuel Assemblies (Finished Units)						
4			Uranium Ore and Concentrates (Pounds U3O8)						
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)						
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)						
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)						
			Fuel Assemblies (Finished Units)						
5			Uranium Ore and Concentrates (Pounds U3O8)						
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)						
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)						
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)						
			Fuel Assemblies (Finished Units)						
6			Uranium Ore and Concentrates (Pounds U3O8)						
			Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)						
			Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)						
			Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)						
			Fuel Assemblies (Finished Units)						

7		Uranium Ore and Concentrates (Pounds U3O8)							
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)							
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Fuel Assemblies (Finished Units)							
8		Uranium Ore and Concentrates (Pounds U3O8)							
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)							
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Fuel Assemblies (Finished Units)							
9		Uranium Ore and Concentrates (Pounds U3O8)							
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)							
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Fuel Assemblies (Finished Units)							
10		Uranium Ore and Concentrates (Pounds U3O8)							
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)							
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Fuel Assemblies (Finished Units)							
11		Uranium Ore and Concentrates (Pounds U3O8)							
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)							
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Fuel Assemblies (Finished Units)							
12		Uranium Ore and Concentrates (Pounds U3O8)							
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)							
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Fuel Assemblies (Finished Units)							
13		Uranium Ore and Concentrates (Pounds U3O8)							
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)							
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Fuel Assemblies (Finished Units)							
14		Uranium Ore and Concentrates (Pounds U3O8)							
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)							
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Fuel Assemblies (Finished Units)							
15		Uranium Ore and Concentrates (Pounds U3O8)							
		Uranium Compounds (Oxide, Hexafluoride, Other) (KgU)							
		Enriched Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Depleted Uranium (Oxide, Hexafluoride, Other) (KgU)							
		Fuel Assemblies (Finished Units)							
Comments:									
BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act									

3c: Facility Refueling Cycle

Provide information pertaining to the reloading/refueling cycle for each of your organization's facilities, current as of 12/31/2018. If your organization operates two different reactor types at the same facility, separately report refueling information for each reactor type.

	U.S. Facility Name	Fresh Fuel Batch Size (Number of Assemblies)	Uranium Contained in Fresh Fuel Batch (Pounds U3O8 Equivalent)	Percentage of Total Reactor Assemblies Replaced During Refuel	Refueling Cycle Length (Months)	Refueling Outage Length (Days)	Fuel Cycle Costs as Percentage of Total Facility Operating Costs				Aggregate Fuel Cycle Expenses as Percentage of Total Facility Operating Costs
							U3O8 Acquisition (Mining, Milling)	Conversion Services/UF6 Acquisition	Enrichment Services/EUP Acquisition	Fuel Fabrication Services	
A. 1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
Since 2014, has your organization considered or implemented changes in a facility's refueling cycle (e.g. lengthening the refueling cycle)?			Yes	If yes, describe.							
Describe your organization's typical sequence for procuring nuclear fuel.											
Comments:											

BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

3d: Changes in Facility Operations, 1999-2018

Identify any U.S. nuclear power generation facility closings, relocations, contractions, expansions, corporate acquisitions or consolidations, or other major changes in operations (report as many as applicable). For each change, provide the reasons for the change in operations (e.g., loss of market share to imports, loss/gain of market share from domestic competition, increasing/declining demand, low/high profitability, firm restructuring), and megawatthours of nuclear power impacted, as well as number of full-time-equivalent (FTE) employees impacted. Denote reductions with a "-" symbol. If a single facility has gone through multiple changes, list the facility on multiple lines and identify each separately.

Facility Name	Type of Change	Date of Change	Reason for Change	Annual MWh Capacity	Annual MWh Impacted	Number of FTEs Impacted	Explanation
1	Closure						
2	Standby/Idle						
3	Contraction						
4	Expansion						
5	Significant Modernization						
6	Transfer/Sale						
7	Other						
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

Answer the following questions about facility changes in Section B and C.

If one of your organization's facilities was in the decommissioning process and had discharged its operator license, how long would it take, if possible, to fully restart operations at that facility? For each facility that your organization operates, indicate the factors that might inhibit restarting operations and the degree of impact for each factor. Estimate the total costs associated with each factor, and then explain your reasoning for your choices.

Facility Name	Estimated Time to Restart (in days)	Estimated Cost to Restart (in \$1000s USD)	Factors Inhibiting Restart		Estimated Cost of Each Factor (in \$1000s USD)	Explain
			Factor	Degree of Impact		
1			Operations	High		
			Regulatory (non-Environmental)	Moderate		
			Environmental	Low		
			Employment	None		
			Other (specify)			
2			Operations			
			Regulatory (non-Environmental)			
			Environmental			
			Employment			
			Other (specify)			
3			Operations			
			Regulatory (non-Environmental)			
			Environmental			
			Employment			
			Other (specify)			
4			Operations			
			Regulatory (non-Environmental)			
			Environmental			
			Employment			

				Other (specify)			
				Operations			
5				Regulatory (non-Environmental)			
				Environmental			
				Employment			
				Other (specify)			
				Operations			
6				Regulatory (non-Environmental)			
				Environmental			
				Employment			
				Other (specify)			
				Operations			
7				Regulatory (non-Environmental)			
				Environmental			
				Employment			
				Other (specify)			
				Operations			
8				Regulatory (non-Environmental)			
				Environmental			
				Employment			
				Other (specify)			
				Operations			
9				Regulatory (non-Environmental)			
				Environmental			
				Employment			
				Other (specify)			
				Operations			
10				Regulatory (non-Environmental)			
				Environmental			
				Employment			
				Other (specify)			
				Operations			
11				Regulatory (non-Environmental)			
				Environmental			
				Employment			
				Other (specify)			
				Operations			
12				Regulatory (non-Environmental)			
				Environmental			
				Employment			
				Other (specify)			
				Operations			
13				Regulatory (non-Environmental)			
				Environmental			
				Employment			
				Other (specify)			
				Operations			
14				Regulatory (non-Environmental)			
				Environmental			
				Employment			
				Other (specify)			
				Operations			
15				Regulatory (non-Environmental)			
				Environmental			
				Employment			
				Other (specify)			

If one of your organization's facilities was in standby but had not discharged its operator license, how long would it take, if possible, to fully restart operations at that facility? Assume the facility is not in standby for scheduled maintenance for refueling purposes. For each type of facility that your organization operates, indicate the factors that might inhibit the process in the space provided, ranking them from 1 to 5, with 1 being the most challenging factor, then explain the reasoning behind your choice.

	Facility Name	Estimated Time to Restart	Estimated Cost to Restart	Factors Inhibiting Restart		Estimated Cost of Each Factor (Thousands USD)	Explain
				Factor	Degree of Impact		
1				Operations			
				Cost of Standby			
				Regulatory (non-Environmental)			
				Environmental			
				Employment			
2				Other (specify)			
				Operations			
				Cost of Standby			
				Regulatory (non-Environmental)			
				Environmental			
3				Employment			
				Other (specify)			
				Operations			
				Cost of Standby			
				Regulatory (non-Environmental)			
4				Environmental			
				Employment			
				Other (specify)			
				Operations			
				Cost of Standby			
5				Regulatory (non-Environmental)			
				Environmental			
				Employment			
				Other (specify)			
				Operations			
6				Cost of Standby			
				Regulatory (non-Environmental)			
				Environmental			
				Employment			
				Other (specify)			
7				Operations			
				Cost of Standby			
				Regulatory (non-Environmental)			
				Environmental			
				Employment			
8				Other (specify)			
				Operations			
				Cost of Standby			
				Regulatory (non-Environmental)			
				Environmental			
9				Employment			
				Other (specify)			
				Operations			
				Cost of Standby			
				Regulatory (non-Environmental)			

C.

10				Operations			
				Cost of Standby			
				Regulatory (non-Environmental)			
				Environmental			
				Employment			
Other (specify)							
11				Operations			
				Cost of Standby			
				Regulatory (non-Environmental)			
				Environmental			
				Employment			
Other (specify)							
12				Operations			
				Cost of Standby			
				Regulatory (non-Environmental)			
				Environmental			
				Employment			
Other (specify)							
13				Operations			
				Cost of Standby			
				Regulatory (non-Environmental)			
				Environmental			
				Employment			
Other (specify)							
14				Operations			
				Cost of Standby			
				Regulatory (non-Environmental)			
				Environmental			
				Employment			
Other (specify)							
15				Operations			
				Cost of Standby			
				Regulatory (non-Environmental)			
				Environmental			
				Employment			
Other (specify)							
D.	Describe the costs associated with maintaining a facility in standby, and estimate the total costs involved in maintaining a standby facility.						
	Would your organization opt to maintain a facility in standby?	Yes	If yes, explain.				
	Describe the costs and regulatory factors associated with maintaining a "brownfield" site.						
	Describe the costs and regulatory factors associated with maintaining a "greenfield" site.						
Comments:							
BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act							

4: Production Capacity

Provide the facility-level information regarding production capacity and CO2 offset below.

	Facility Name	Facility Location	Reactor Type	Average Annual Production 2014-2018 (MWh)	Average Annual Production Capacity 2014-2018 (MWh)	Average Capacity Utilization 2014-2018 (%)	Explanation for Difference Between Production Capacity and Annual Production, if Applicable	Fuel Cycle Cost as % of MWh Cost				Annual Estimated Facility CO2 Offset (Tons)
								Uranium Concentrate (U3O8)	UF6 Conversion	Enrichment	Fuel Fabrication	
A.	1		PWR and BWR									
	2											
	3											
	4											
	5											
	6											
	7											
	8											
	9											
	10											
	11											
	12											
	13											
	14											
	15											
B.	1	Are your facilities capable of load following (e.g. ramping up and down electric output depending on demand)? Explain.		Yes	If yes, explain.							
	2	What changes to supply factors would contribute the most to change in MWh cost? Explain.										
Comments:												

BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

5: Permits

Provide the permit information for your facilities below for both the state and federal level. Include permits for environmental and safety aspects.

A.	Facility Name	Permit Type	Issuing Agency	Cost of Permit	Average Length of Processing Time	Original Permit Date	Original Permit Expiration Date	Number of Renewal Applications	Average Renewal Application Length	Expiration Date of Current Permit	Plans to Renew Current Permit	Explanation
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
	Has your organization had difficulty obtaining permits for operation? If yes, explain below.											
1												
	Have your permitting costs increased in the last ten years? If yes, explain below.											
2												
	If you indicated that your organization does not plan to renew a permit, describe the factors that have influenced those decisions below.											
3												
	Does your organization have any suggestions that would help improve the permitting process?											
4												
Comments:												

BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

6: Financials

Provide the following financial line items for your organization's nuclear power generation-related U.S. operations below for the 2014 to 2018 period.

1	Income Statement (Select Line Items)		Record \$ in Thousands, e.g. \$12,000.00 = survey input of \$12				
			2014	2015	2016	2017	2018
	A.	Net Sales (and other revenue)					
	B.	Cost of Goods Sold					
	C.	Total Operating Income (Loss)					
	D.	Earnings Before Interest and Taxes					
E.	Net Income						

2	Balance Sheet (Select Line Items)		Record \$ in Thousands, e.g. \$12,000.00 = survey input of \$12				
			2014	2015	2016	2017	2018
	A.	Cash					
	B.	Inventories					
	C.	Total Current Assets					
	D.	Total Assets					
	E.	Total Current Liabilities					
	F.	Total Liabilities					
	G.	Retained Earnings					
H.	Total Owner's Equity						

Note: Total Assets must equal Total Liabilities plus Total Owner's Equity

3			2014	2015	2016	2017	2018
	Total Revenue per MWh						
		Total Operating Costs per MWh					
4			2014	2015	2016	2017	2018
	Federal Taxes Paid						
	State Taxes Paid						
		Local Taxes Paid					

Comments:

BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

7: Capital Expenditures

Record your organization's nuclear power generation-related capital expenditures corresponding to the select categories below for the 2014 to 2018 period.

Capital Expenditure Activity Type		Record \$ in Thousands, e.g. \$12,000.00 = survey input of \$12				
		2014	2015	2016	2017	2018
A	Total Capital Expenditures					
1	Machinery, Equipment, and Vehicles [as a % of A]					
2	IT, Computers, Software [as a % of A]					
3	Land, Buildings, and Leasehold Improvements [as a % of A]					
4	Fuel [as a % of A]					
5	Other (Specify) [as a % of A]					
6	Other (Specify) [as a % of A]					
Lines 1 through 5 must total 100%						

For the below categories, indicate whether your organization experienced significant changes (increases, decreases, or both), in uranium and/or nuclear fuel capital expenditures over the past ten years (2009-2018). Explain what factors have been affecting changes in your organization's capital expenditures from 2009 to 2018, including, but not limited to, U.S. Government or state government policies or regulations, domestic and foreign competition, and declining uranium prices.

		Yes/No	If Yes, Type of Change	Explain
B	1 Machinery, Equipment, and Vehicles			
	2 IT, Computers, Software			
	3 Land, Buildings, and Leasehold Improvements			
	4 Fuel			
	5 Other (Specify)			
	6 Other (Specify)			

Comments:

8: Research & Development

A. Has your organization conducted nuclear power generation-related research and development (R&D) in the past ten years? If no, proceed to Section 9.

Record your organization's total R&D dollar expenditures and type of R&D expenditure for the 2014 to 2018 period.

		Record \$ in Thousands, e.g. \$12,000.00 = survey input of \$12				
		2014	2015	2016	2017	2018
B.	1	Total R&D Expenditures				
	2	Basic Research [as a % of B1]				
	3	Applied Research [as a % of B1]				
	4	Product/Process Development [as a % of B1]				
	5	Total of 2 - 4 [must equal 100%]	0%	0%	0%	0%

Identify your organization's R&D funding sources, by percent total of R&D dollars sourced.

		Record \$ in Thousands, e.g. \$12,000.00 = survey input of \$12				
		2014	2015	2016	2017	2018
C.	1	Total R&D Funding Sources				
	2	Internal/Self-Funded/IRAD [as a % of C1]				
	3	Total Federal Government [as a % of C1]				
	4	Total State and Local Government [as a % of C1]				
	5	Universities - Public and Private [as a % of C1]				
	6	U.S. Industry, Venture Capital, Non-Profit [as a % of C1]				
	7	Non-U.S. Investors [as a % of C1]				
	8	Other (specify)				
	9	Total of 2 - 8 [must equal 100%]	0%	0%	0%	0%

D. 1 For 2014 to 2018, did your organization experience constraints (for example, inadequate revenue) on U.S. R&D activities? If yes, explain and identify additional R&D activities that would occur absent those constraints.

E.		Is your organization currently working with any foreign partners with respect to R&D activities?			If yes, answer the following questions.	
	Partner Company	Company Headquarters	Partnership Start Date	Goal of Partnership	Reason for choosing Partner	Percent of R&D Expenditures
1						
2						
3						
4						
5						

Comments:

Depleted Uranium - Fluorides (Pounds USOB Equivalent)

Table with columns: Seller Name, Country of Seller Headquarters, Delivery Date, Date of Contract Signature, Type of Contract, Date of Contract Renegotiation (If Applicable), Reason for Contract Renegotiation (If Applicable), Pricing Mechanism, Contract Completed?, Years Remaining on Contract (If Applicable), Open Origin, Country of USOB Origin, Price Per Unit (USD), Quantity Delivered, Value of Quantity Delivered (Thousands USD), and Deliveries as Estimated Percentages of Fuel Capital Budget (2019-2023).

Depleted Uranium - Other (Pounds USOB Equivalent)

Table with columns: Seller Name, Country of Seller Headquarters, Delivery Date, Date of Contract Signature, Type of Contract, Date of Contract Renegotiation (If Applicable), Reason for Contract Renegotiation (If Applicable), Pricing Mechanism, Contract Completed?, Years Remaining on Contract (If Applicable), Open Origin, Country of USOB Origin, Price Per Unit (USD), Quantity Delivered, Value of Quantity Delivered (Thousands USD), and Deliveries as Estimated Percentages of Fuel Capital Budget (2019-2023).

Depleted Uranium - Metal (Pounds USOB Equivalent)

Table with columns: Seller Name, Country of Seller Headquarters, Delivery Date, Date of Contract Signature, Type of Contract, Date of Contract Renegotiation (If Applicable), Reason for Contract Renegotiation (If Applicable), Pricing Mechanism, Contract Completed?, Years Remaining on Contract (If Applicable), Open Origin, Country of USOB Origin, Price Per Unit (USD), Quantity Delivered, Value of Quantity Delivered (Thousands USD), and Deliveries as Estimated Percentages of Fuel Capital Budget (2019-2023).

Enriched Uranium - Oxide (Pounds USOB Equivalent)

Table with columns: Seller Name, Country of Seller Headquarters, Delivery Date, Date of Contract Signature, Type of Contract, Date of Contract Renegotiation (If Applicable), Reason for Contract Renegotiation (If Applicable), Pricing Mechanism, Contract Completed?, Years Remaining on Contract (If Applicable), Open Origin, Country of USOB Origin, Price Per Unit (USD), Quantity Delivered, Value of Quantity Delivered (Thousands USD), and Deliveries as Estimated Percentages of Fuel Capital Budget (2019-2023).

Finished Fuel Assemblies (FNA, BW, or Other) (Finished Units)

If your organization does not anticipate any deliveries of this product in the 2019-2023 period, please choose "Not Applicable" in the space provided.

Not Applicable

Deliveries as Estimated Percentages of Fuel Capital Budget

Seller Name	Country of Seller Headquarters	Delivery Date	Date of Contract Signature	Type of Contract	Date of Contract Renegotiation (If Applicable)	Reason for Contract Renegotiation (If Applicable)	Pricing Mechanism	Contract Completed?	Years Remaining on Contract (If Applicable)	Open Origin	Country of USOE Origin	Price Per Unit (USD)	Quantity Delivered	Value of Quantity Delivered (Thousands USD)	Estimated Percentage of 2019 Fuel Capital Budget (Percent USOE Equivalent)	Estimated Percentage of 2019 Fuel Capital Budget (Thousands USD)	Estimated Percentage of 2020 Fuel Capital Budget (Percent USOE Equivalent)	Estimated Percentage of 2020 Fuel Capital Budget (Thousands USD)	Estimated Percentage of 2021 Fuel Capital Budget (Percent USOE Equivalent)	Estimated Percentage of 2021 Fuel Capital Budget (Thousands USD)	Estimated Percentage of 2022 Fuel Capital Budget (Percent USOE Equivalent)	Estimated Percentage of 2022 Fuel Capital Budget (Thousands USD)	Estimated Percentage of 2023 Fuel Capital Budget (Percent USOE Equivalent)	Estimated Percentage of 2023 Fuel Capital Budget (Thousands USD)
				Short Term		Price	Fixed	Yes																
				Long Term		Short-term	Market	No																
						Other	Shared Risk Market																	
							Other (Specify in Comments)																	

Comments

11: Projected Shipments to Enrichment Services Providers and Unfilled Uranium Requirements, 2019-2028

Answer the following questions about projected shipments to enrichment services providers and unfilled uranium requirements.

Projected Shipments to Enrichment Services Providers (Pounds U308 Equivalent)										
A	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Unfilled Uranium Requirements (Pounds U308 Equivalent)										
B	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
C	Has your organization changed its timeframe for filling uranium requirements? (e.g., if your organization previously filled requirements five years in advance but now only fills three years in advance) Explain.				Yes					
Comments:										

BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

12: Logistics

Answer the following questions about transportation of your imported uranium products. For this question, initial port of export is defined as the first port through which a uranium product leaves a foreign country after your organization has acquired title to the product.

Uranium Products			
E	Top Ten Initial Ports of Export (Ranked by Volume of Pounds U3O8 equivalent)	Carriers Serving Port	Percentage of Total Imports of Uranium Products
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

If any of the ports listed above were to be closed, what ports would your organization use to export uranium?

Describe any difficulties your organization has encountered in complying with the Foreign Corrupt Practices Act as pertains to the transportation and export of uranium products.

Comments:

BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

13: Employment

Record the total number of full time equivalent (FTE) employees and contractors for 2009, and again for the 2014 to 2018 period.

		2009	2014	2015	2016	2017	2018
A	FTE Employees						
	FTE Contractors						

Answer the following questions about employment difficulties, workforce age, educational requirements, vacancies, and changes in employment.

Occupation	Difficulty	Explanation for Difficulty, if Applicable	FTEs Impacted (2014-2018)		Current Average Age of Worker (2019)	Educational Requirements (Formal and On-The-Job)	On-The-Job Training Requirements (OJT)	Current Number of Vacancies (2019)	Average Weeks Vacant	Explanation
			If FTEs were impacted due to changes in facility operations, indicate which types of employees were impacted	Type of Employment Impact						
Engineering (Civil, Electrical, Mechanical, Chemical, Other)	Hiring					No Formal Educational Credential	No OJT Required			
Engineering (Nuclear)	Retaining					High School Diploma or Equivalent	Less Than A Month Of OJT Required			
Nuclear-Related Administrative Professions (Nuclear Planning, Nuclear Oversight)	Both					Associate's Degree	Between 1 Month And 6 Months Of OJT Required			
Non-Nuclear Administrative Professions (Accountants, Financial, Lawyers)	None					Bachelor's Degree	Between 6 Months To 1 Year Of OJT Required			
Nuclear Technicians & Radiation Workers (Radiation Protection Specialists, Reactor Operators, Control Room Personnel)						Master's Degree	Between 1 And 2 Years Of OJT Required			
Non-Nuclear Technicians (Heavy Equipment Operators, Mechanics, Electricians)						Doctoral or Professional Degree	Over 2 Years Of OJT Required			
Security Personnel (Guards, Emergency Management)										
Skilled Trades (Carpenters, Masons, Pipefitters, Sheet metal workers, Welders)										
Other	(specify here)									

Does the industry experience any amount of workforce cross-over between commercial and government nuclear power generation activities? Explain.

C	Yes	
---	-----	--

Are the skills associated with the workforce in your organization transferable to other industries? Explain.

D	Yes	
---	-----	--

Does the geographic location of your organization's facilities play any role in the challenges in hiring, retaining, and rehiring employees? Explain.

E	Yes	
---	-----	--

If one of your facilities were idled, how long do you reasonably anticipate being able to rehire workers laid off due to the idling?

F	
---	--

If your organization utilizes or provides consulting services that assist in optimizing core business processes relating to your organization's role in the nuclear fuel cycle, describe the types of firms you work with, and the substance of the consulting work.

G	
---	--

Comments:	
-----------	--

14a: Market Trends

From your organization's perspective, explain political support and public perception within United States and outside of the United States of nuclear power has changed from 2009 to 2018. Explain any trends and describe the principal factors that have affected these changes in perception.

Market		Overall Change	Explanation and Factors
A	Within the United States		
	Outside the United States		

From 2009 to 2018, indicate whether uranium import competition has affected your U.S. operations, sales, employment, planned expansions, investments, etc. with respect to the production nuclear power. Explain your answers.

	Item	Yes/No	Explain
1	Manufacturing Operations	Yes	
2	Sales	Yes	
3	Employment	Yes	
4	Planned Expansions	Yes	
5	Other (specify)	Yes	

From 2009 to 2018, has your organization experienced any negative effects on its return on investment or its growth, investment, ability to raise capital, existing development and production efforts, or the scale of capital investments as a result of imports of any type of uranium or nuclear fuel assemblies into the United States? Indicate Yes/No to the right and explain below.

Yes

B.	1	Return on Investment	Yes	
	2	Investments	Yes	
	3	Ability to Raise Capital	Yes	
	4	Existing Development/ Production Efforts	Yes	
	5	Scale of Capital Investments	Yes	
	6	Other (specify)	Yes	

Does your organization anticipate any negative effects on its business due to future imports of any type of uranium or nuclear fuel assemblies into the United States, particularly from countries with state-owned enterprises such as Russia, Kazakhstan, Uzbekistan, and China? Indicate Yes/No to the right and explain below.			Yes
1	Russia	Yes	
2	Kazakhstan	Yes	
3	Uzbekistan	Yes	
4	China	Yes	
5	Other (Specify)	Yes	
Describe the top 5 most significant challenges to the competitive position of your organization's U.S. nuclear operations in the U.S. energy market.			
C	1		
	2		
	3		
	4		
	5		
Describe the top 5 most significant challenges to the competitive position of your organization's non-U.S. nuclear operations in the non-U.S. energy market.			
	1		
	2		
	3		
	4		
	5		
Are there proposed regulatory or legislative initiatives at the federal or state level that would improve the financial viability of your organization's nuclear power generation facilities? Explain below.			Yes
D			
Comments:			
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14b: Competitive Hardships

Please answer the following questions, then provide explanations for your answers.

Prices and Practices		-Yes/No-	Explain
A	1 Has your organization engaged in any cost-cutting measures in order to compete in the current energy market? Explain.	Yes	
	2 Has your organization made significant operational or strategic changes in order to better compete in the energy market? Explain.	Yes	
	3 Does your organization incorporate national security considerations in its assessment of reliability and risk as pertains to selection of uranium suppliers?	Yes	
Operational Practices		-Yes/No-	Explain
B	1 Do your organization's nuclear power facilities provide baseload generation capacity?	Yes	
	2 Have any of your facilities had to reduce electrical output due to market or other conditions? If yes, what factors contributed to this?	Yes	
	3 Is your organization considering a change in any of your facilities' operating flexibility to respond to market conditions? Describe.	Yes	
	4 In the event of a disruption in fuel delivery to any of your facilities, would your organization need to decrease output at that facility? If yes, how long could that facility operate at full capacity without refueling?	Yes	
Regulatory Factors and Competition		-Yes/No-	Explain
C	1 Has your organization experienced difficulties selling energy due to competition from solar and wind producers, particularly those who sell energy at zero or negative cost?	Yes	
	2 Have state Renewable Portfolio Standards had an impact on your facilities' viability?	Yes	
	3 Have federal or state regulatory frameworks affected your organization's ability to economically operate your power generation facilities?	Yes	
	4 Does your organization perceive that current energy pricing does not reflect the value of nuclear energy?	Yes	
	5 Has low cost natural gas affected your organization's competitiveness? Explain.	Yes	
	6 Does your organization receive any state or federal subsidies for facilities involved in the generation of nuclear power? Explain.	Yes	
	7 Has the U.S. Department of Energy's program of selling off natural uranium and LEU stocks affected your organization? Explain.	Yes	
	8 Excluding license extensions, has your organization performed mandated regulatory upgrades since 1999? If so, does your organization believe that these upgrades were warranted?	Yes	
	9 Does your organization believe that regulatory costs are more burdensome than fuel costs?	Yes	

International Operations and Factors		-Yes/No-	Explain
1	Excluding direct government subsidies, do you believe that foreign uranium producers operate at lower costs than U.S. producers? Explain.	Yes	
2	Does your organization consider environmental, health, safety, and labor standards in foreign countries when considering business with foreign suppliers?	Yes	
3	Does your organization purchase uranium products from Russia, China, Kazakhstan, and Uzbekistan? If so, describe what factors your organization considers in its risk analysis reports for these countries.	Yes	
4	Will China's increasing presence in the nuclear fuel sector affect your organization? Explain.	Yes	
5	Has the 2011 Fukushima disaster impacted your organization's nuclear power operations? Explain.	Yes	
D 6	Have foreign suppliers offered to offset any potential costs imposed by a potential remedy under Section 232? If so, explain.	Yes	
7	Do nuclear power generators face challenges in complying with the Foreign Corrupt Practices Act (FCPA) when purchasing imported uranium products from foreign countries? Identify any specific countries where these practices, as defined in the FCPA, are prevalent.	Yes	
8	Do uranium producers operating in foreign market economies (e.g. Canada, Australia) have competitive advantages (e.g. geology, business practices, logistics chain) over U.S. producers?		
9	Do regulatory or legislative frameworks give operators in foreign market economies (e.g. Canada, Australia) advantages over U.S. producers?		
10	Has your organization dealt with any supply disruptions from foreign sources in the past five years? Explain.	Yes	
Russian Presence on the Global Uranium Market		-Yes/No-	Explain
1	How have restrictions on imports of Russian uranium affected your organization?	Yes	
E 2	How would your organization's posture be affected by an increased Russian presence in the U.S. market?	Yes	
3	Would your organization plan to purchase more Russian-origin uranium if the suspension agreement ends in 2020?	Yes	

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15: Certification

The undersigned certifies that the information herein supplied in response to this questionnaire is complete and correct to the best of his/her knowledge. It is a criminal offense to willfully make a false statement or representation to any department or agency of the United States Government as to any matter within its jurisdiction (18 U.S.C. 1001 (1984 & SUPP. 1197)).

Once your organization has completed this survey, save a copy and submit it via email to Uranium232@bis.doc.gov. Be sure to retain your survey for your records and to facilitate any necessary edits or clarifications.

BIS Survey Website <https://www.bis.doc.gov/nuclearoperator>

Organization Name	
Organization's Internet Address	
Name of Authorizing Official	
Title of Authorizing Official	
E-mail Address	
Phone Number and Extension	
Date Certified	

In the box below, provide any additional comments or any other information you wish to include regarding this survey assessment.

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How many hours did it take to complete this survey?	
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