

**FY 2014 Isotope Supply/Demand Questionnaire**  
**Federal Agencies**

The mission of the Department of Energy (DOE) Isotope Development and Production for Research and Applications Program (Isotope Program, IP) in the DOE's Office of Science for Nuclear Physics (NP) is to develop, produce and distribute stable and radioactive isotope products that are of critical strategic importance to the Nation and are in short supply. Stable and radioactive isotopes are vital to the mission of many Federal Agencies and play a crucial role in basic research, medicine, industry, and homeland defense. Federal Agencies that have used isotopes produced by the IP include the National Institutes of Health and their grantees, National Institute of Standards and Technology, Environmental Protection Agency, Department of Agriculture, National Nuclear Security Administration and other organizations within the Department of Energy, Department of Homeland Security, and others. The Workshops on Isotope Federal Supply and Demand are very important to the DOE Isotope Program in assessing the Nation's demand for high priority isotopes to inform our strategic planning for isotope production development; and to ensure that federal agency needs were met.

To prepare for this Workshop on Isotope Federal Supply and Demand, we are requesting that each Agency complete this form by **October 31, 2014**. Institutions should consider isotope demands needed for their own mission accomplishment. The focus is on high priority isotopes for mission accomplishment, isotopes which your institution has a concern might be or is in short supply, desired isotopes that are not currently available on the market at all, and those isotopes in which your institution foresees a significant change in demand (which could create a supply constraint). Many programs have purchased devices such as detectors and calibration sources and gauges that contain isotopes that originated from the DOE's IP. Please consider this in your analysis thus assuring that your future requirements will be met.

We recognize that the isotope product chain can be long at times, and your organization's needs may take some effort on your part. We appreciate and thank you in advance for your participation in this exercise, which will enhance communication between agencies and help mitigate and avoid shortages in critical isotopes. This input will help ensure the DOE Isotope Program that important isotopes to federal missions will be available and aid in the mitigation of potential supply shortages. The input will also be used to guide investments in R&D to develop techniques to produce new isotopes of interest that are not currently available.

*In addition, upon request of the Bureau of Land Management, we are gathering specific input regarding Agency needs of Helium-4 available through the Bureau of Land Management "in-kind" distribution program. A separate table (Table 2) is included specifically to document estimated He-4 demand.*

## Isotope Supply/Demand Questionnaire

(Deadline for submission: October 31, 2014)

### **A. Isotope Demand/Supply Questionnaire**

Provide information in Table 1 on stable and radioactive isotopes **your** Agency (or your Agency's community) plans to use for **your** Agency mission accomplishment over the next five years. Please include high priority isotopes for mission accomplishment, isotopes which your Agency has a concern might be or is in short supply, desired isotopes that are not currently available on the market at all but which you would be interested in obtaining, and those isotopes in which your Agency foresees a significant change in demand (which could create a supply constraint). **Do not include isotopes for projects funded by other agencies at your sites.** Do not include He-3 in this exercise because it has a separate, rigorous process for identifying needs. However, do include in-kind (refined) helium, as described below, in Table 2. If you are uncertain whether your institutions will need any or all of the isotopes you list during the time period of interest, please complete the Supply/Demand Questionnaire regardless and indicate this situation below. If a specific isotope is not requested by you or anyone else, then there is no guarantee that it will be considered for production in the near future. *By submitting this form, you are not placing an order or committing to a need for these isotopes.*

## ISOTOPE SUPPLY/DEMAND QUESTIONNAIRE

**Federal Agency:** \_\_\_\_\_ **POC:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
 Name, phone number, email address

**Table 1. Isotope Demand**

The table below is an embedded MS Excel worksheet. Double click on it to enter data.

Federal Agency:				POC (name, phone #, email address):					Date:	
Isotope	Research or Applied	User (Agency, Nat. Lab, Univ., or others)	Intended Use	Purity and/or specifications	Physical Form	Qty. FY2015	Qty. FY2016	Qty. FY2017	Qty. FY2018	Qty. FY2019

*Isotope:* List the isotope that is or is anticipated to be in short supply and that the DOE Isotope Program should produce and distribute. Examples are C-14, U-238, W-188, Gd-153, Ni-63, At-211.

*Research or Applied:* Identify if the isotope is used for research or application purpose.

*User:* Please identify if the isotope will be used internally or externally by grantee or contractor (under contract or planned) and provide the name of the grantee or contractor.

*Intended Use:* Briefly describe how the isotope will be used, i.e., drug discovery, cancer therapy or diagnostics, calibration source, radiography, neutron detection, environmental remediation, standards and tracers, etc.

*Purity and/or specifications:* Enrichment, specific activity, radioisotopic purity, radiochemical purity, radioactive concentration, etc.

*Physical Form:* gas, liquid, solid (nitrate, chloride, etc.), generator system.

*Qty FY 2015-1019:* Provide your best estimate on isotope quantities needed over each of the next 5 years. Be sure to include measurement unit (e.g., grams, liters, curies) and environmental condition if appropriate (e.g., standard temperature and pressure).

**Table 2. Helium-4 Information**

**This specific information is being collected at the request of the White House Office of Science and Technology Policy (OSTP) Office, and the He-4 information only will be shared with OSTP and the Bureau of Land Management to assist with management of the Federal Helium Reserve and the “in-kind” helium program.**

The table below is an embedded MS Excel worksheet. Double click on it to enter data.

Isotope	User (Agency, Nat. Lab., Univ., or others)	Form (gas or liquid)	FY 15 Q1	FY 15 Q2	FY 15 Q3	FY 15 Q4	FY 16	FY 17
He-4								
Isotope continued	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25
He-4								

*Helium-4 only:* In-kind (refined) helium (sold from Bureau of Land Management reserves) - volumes either liquid (liters) or gas (cubic feet), or both, by quarter for FY 2015 and by year for FY 2016 through FY 2025.

**Table 3. Isotope Supply**

**Does your institution own any reserves of isotopes that could be distributed? \_\_\_\_\_ (Yes or No; If yes, please elaborate below)**

The table below is an embedded MS Excel worksheet. Double click on it to enter data.


**Please e-mail this Questionnaire Form by October 31, 2014 to Dr. Jehanne Gillo at [Jehanne.Gillo@science.doe.gov](mailto:Jehanne.Gillo@science.doe.gov)**