

(i) at least 1 regional clean hydrogen hub shall demonstrate the end-use of clean hydrogen in the electric power generation sector;

(ii) at least 1 regional clean hydrogen hub shall demonstrate the end-use of clean hydrogen in the industrial sector;

(iii) at least 1 regional clean hydrogen hub shall demonstrate the end-use of clean hydrogen in the residential and commercial heating sector; and

(iv) at least 1 regional clean hydrogen hub shall demonstrate the end-use of clean hydrogen in the transportation sector.

**(C) Geographic diversity**

To the maximum extent practicable, each regional clean hydrogen hub—

(i) shall be located in a different region of the United States; and

(ii) shall use energy resources that are abundant in that region.

**(D) Hubs in natural gas-producing regions**

To the maximum extent practicable, at least 2 regional clean hydrogen hubs shall be located in the regions of the United States with the greatest natural gas resources.

**(E) Employment**

The Secretary shall give priority to regional clean hydrogen hubs that are likely to create opportunities for skilled training and long-term employment to the greatest number of residents of the region.

**(F) Additional criteria**

The Secretary may take into consideration other criteria that, in the judgment of the Secretary, are necessary or appropriate to carry out this subchapter<sup>1</sup>

**(4) Funding of regional clean hydrogen hubs**

The Secretary may make grants to each regional clean hydrogen hub selected under paragraph (2) to accelerate commercialization of, and demonstrate the production, processing, delivery, storage, and end-use of, clean hydrogen.

**(d) Authorization of appropriations**

There is authorized to be appropriated to the Secretary to carry out this section \$8,000,000,000 for the period of fiscal years 2022 through 2026.

(Pub. L. 109-58, title VIII, §813, as added Pub. L. 117-58, div. D, title III, §40314(2), Nov. 15, 2021, 135 Stat. 1008.)

**Editorial Notes**

**PRIOR PROVISIONS**

A prior section 813 of Pub. L. 109-58 was renumbered section 818 and is classified to section 16162 of this title.

**Statutory Notes and Related Subsidiaries**

**WAGE RATE REQUIREMENTS**

For provisions relating to rates of wages to be paid to laborers and mechanics on projects for construction, alteration, or repair work funded under div. D or an amendment by div. D of Pub. L. 117-58, including au-

thority of Secretary of Labor, see section 18851 of this title.

**§ 16161b. National clean hydrogen strategy and roadmap**

**(a) Development**

**(1) In general**

In carrying out the programs established under sections 16154 and 16161a of this title, the Secretary, in consultation with the heads of relevant offices of the Department, shall develop a technologically and economically feasible national strategy and roadmap to facilitate widescale production, processing, delivery, storage, and use of clean hydrogen.

**(2) Inclusions**

The national clean hydrogen strategy and roadmap developed under paragraph (1) shall focus on—

(A) establishing a standard of hydrogen production that achieves the standard developed under section 16166(a) of this title, including interim goals towards meeting that standard;

(B)(i) clean hydrogen production and use from natural gas, coal, renewable energy sources, nuclear energy, and biomass; and

(ii) identifying potential barriers, pathways, and opportunities, including Federal policy needs, to transition to a clean hydrogen economy;

(C) identifying—

(i) economic opportunities for the production, processing, transport, storage, and use of clean hydrogen that exist in the major shale natural gas-producing regions of the United States;

(ii) economic opportunities for the production, processing, transport, storage, and use of clean hydrogen that exist for merchant nuclear power plants operating in deregulated markets; and

(iii) environmental risks associated with potential deployment of clean hydrogen technologies in those regions, and ways to mitigate those risks;

(D) approaches, including substrategies, that reflect geographic diversity across the country, to advance clean hydrogen based on resources, industry sectors, environmental benefits, and economic impacts in regional economies;

(E) identifying opportunities to use, and barriers to using, existing infrastructure, including all components of the natural gas infrastructure system, the carbon dioxide pipeline infrastructure system, end-use local distribution networks, end-use power generators, LNG terminals, industrial users of natural gas, and residential and commercial consumers of natural gas, for clean hydrogen deployment;

(F) identifying the needs for and barriers and pathways to developing clean hydrogen hubs (including, where appropriate, clean hydrogen hubs coupled with carbon capture, utilization, and storage hubs) that—

(i) are regionally dispersed across the United States and can leverage natural gas to the maximum extent practicable;

<sup>1</sup> So in original. Probably should be followed by a period.

(ii) can demonstrate the efficient production, processing, delivery, and use of clean hydrogen;

(iii) include transportation corridors and modes of transportation, including transportation of clean hydrogen by pipeline and rail and through ports; and

(iv) where appropriate, could serve as joint clean hydrogen and carbon capture, utilization, and storage hubs;

(G) prioritizing activities that improve the ability of the Department to develop tools to model, analyze, and optimize single-input, multiple-output integrated hybrid energy systems and multiple-input, multiple-output integrated hybrid energy systems that maximize efficiency in providing hydrogen, high-value heat, electricity, and chemical synthesis services;

(H) identifying the appropriate points of interaction between and among Federal agencies involved in the production, processing, delivery, storage, and use of clean hydrogen and clarifying the responsibilities of those Federal agencies, and potential regulatory obstacles and recommendations for modifications, in order to support the deployment of clean hydrogen; and

(I) identifying geographic zones or regions in which clean hydrogen technologies could efficiently and economically be introduced in order to transition existing infrastructure to rely on clean hydrogen, in support of decarbonizing all relevant sectors of the economy.

## (b) Reports to Congress

### (1) In general

Not later than 180 days after November 15, 2021, the Secretary shall submit to Congress the clean hydrogen strategy and roadmap developed under subsection (a).

### (2) Updates

The Secretary shall submit to Congress updates to the clean hydrogen strategy and roadmap under paragraph (1) not less frequently than once every 3 years after the date on which the Secretary initially submits the report and roadmap.

(Pub. L. 109-58, title VIII, §814, as added Pub. L. 117-58, div. D, title III, §40314(2), Nov. 15, 2021, 135 Stat. 1010.)

## Editorial Notes

### PRIOR PROVISIONS

A prior section 814 of Pub. L. 109-58 was renumbered section 819 and is classified to section 16163 of this title.

## Statutory Notes and Related Subsidiaries

### WAGE RATE REQUIREMENTS

For provisions relating to rates of wages to be paid to laborers and mechanics on projects for construction, alteration, or repair work funded under div. D or an amendment by div. D of Pub. L. 117-58, including authority of Secretary of Labor, see section 18851 of this title.

## § 16161c. Clean hydrogen manufacturing and recycling

### (a) Clean hydrogen manufacturing initiative

#### (1) In general

In carrying out the programs established under sections 16154 and 16161a of this title, the Secretary shall award multiyear grants to, and enter into contracts, cooperative agreements, or any other agreements authorized under this Act or other Federal law with, eligible entities (as determined by the Secretary) for research, development, and demonstration projects to advance new clean hydrogen production, processing, delivery, storage, and use equipment manufacturing technologies and techniques.

#### (2) Priority

In awarding grants or entering into contracts, cooperative agreements, or other agreements under paragraph (1), the Secretary, to the maximum extent practicable, shall give priority to clean hydrogen equipment manufacturing projects that—

(A) increase efficiency and cost-effectiveness in—

(i) the manufacturing process; and

(ii) the use of resources, including existing energy infrastructure;

(B) support domestic supply chains for materials and components;

(C) identify and incorporate nonhazardous alternative materials for components and devices;

(D) operate in partnership with tribal energy development organizations, Indian Tribes, Tribal organizations, Native Hawaiian community-based organizations, or territories or freely associated States; or

(E) are located in economically distressed areas of the major natural gas-producing regions of the United States.

#### (3) Evaluation

Not later than 3 years after November 15, 2021, and not less frequently than once every 4 years thereafter, the Secretary shall conduct, and make available to the public and the relevant committees of Congress, an independent review of the progress of the projects carried out through grants awarded, or contracts, cooperative agreements, or other agreements entered into, under paragraph (1).

### (b) Clean hydrogen technology recycling research, development, and demonstration program

#### (1) In general

In carrying out the programs established under sections 16154 and 16161a of this title, the Secretary shall award multiyear grants to, and enter into contracts, cooperative agreements, or any other agreements authorized under this Act or other Federal law with, eligible entities for research, development, and demonstration projects to create innovative and practical approaches to increase the reuse and recycling of clean hydrogen technologies, including by—

(A) increasing the efficiency and cost-effectiveness of the recovery of raw materials