Congressional Budget Office
Cost Estimate

May 28, 2019

At a Glance

H.R. 1014, Offshore Wind for Territories Act

As ordered reported by the House Committee on Natural Resources on May 1, 2019

By Fiscal Year, Millions of Dollars	2019	2019-2024	2019-2029
Direct Spending (Outlays)	0	0	-28
Revenues	0	0	0
Deficit Effect	0	0	-28
Spending Subject to Appropriation (Outlays)	0	3	10

Pay-as-you-go procedures apply?	Yes	**Mandate Effects**	
Increases on-budget deficits in any of the four consecutive 10-year periods beginning in 2030?	No	Contains intergovernmental mandate?	No
		Contains private-sector mandate?	No

n.a. = not applicable; * = between -$500,000 and $500,000.

The bill would authorize

- Auctions of leases for wind and mineral development off the coast of certain U.S. territories and possessions
- Spending of a portion of the income for payments to those jurisdictions (without further appropriation) and for activities administered by the Coastal Reef Conservation Fund (subject to appropriation)
- Spending to conduct auctions and study such offshore wind resources, subject to appropriation

Estimated budgetary effects would primarily stem from increasing

- Collection of offsetting receipts from offshore energy and mineral leases
- Spending subject to appropriation for administrative expenses related to new leasing activities and for the Coastal Reef Conservation Fund

Areas of significant uncertainty include

- The technical and economic feasibility of developing offshore wind and mineral resources in the affected areas
- The amounts companies would be willing to pay to for leases to develop offshore wind resources
- The timing of auctions

Detailed estimate begins on the next page.

See also *CBO's Cost Estimates Explained*, www.cbo.gov/publication/54437;
How CBO Prepares Cost Estimates, www.cbo.gov/publication/53519; and *Glossary*, www.cbo.gov/publication/42904.

Bill Summary

H.R. 1014 would authorize the Department of the Interior (DOI) to auction leases for developing energy and mineral resources off the coast of certain U.S. territories and possessions, subject to certain conditions. In particular, the bill would direct DOI to study the potential for developing offshore wind resources within the territorial jurisdictions of American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands and to offer leases in areas where such development is feasible. Under the bill, 37.5 percent of the income from such leases could be spent without further appropriation for payments to the affected jurisdictions.

Estimated Federal Cost

The estimated budgetary effect of H.R. 1014 is shown in Table 1. The costs of the legislation fall within budget functions 300 (natural resources and environment) and 950 (undistributed offsetting receipts).

Table 1.
Estimated Budgetary Effects of H.R. 1014

	By Fiscal Year, Millions of Dollars												
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2019-2024	2019-2029
	Decreases in Direct Spending												
Estimated Budget Authority	0	0	0	0	0	0	-8	-5	-5	-5	-5	0	-28
Estimated Outlays	0	0	0	0	0	0	-8	-5	-5	-5	-5	0	-28
	Increases in Spending Subject to Appropriation												
Estimated Authorization	0	*	*	1	1	1	1	2	2	1	1	3	10
Estimated Outlays	0	*	*	1	1	1	1	2	2	1	1	3	10

* = between zero and $500,000.

Basis of Estimate

For this estimate, CBO assumes that H.R. 1014 will be enacted by the end of fiscal year 2019. Estimated spending is based on historical patterns for similar activities.

Direct Spending

Based on the prices paid for leases of offshore wind resources in different areas of the Atlantic Ocean and the characteristics of the electricity markets in the Caribbean and the South Pacific, CBO estimates that implementing H.R. 1014 would increase net offsetting receipts (which are recorded in the budget as reductions in direct spending) by $28 million over the 2019-2029 period. That estimate reflects estimated gross proceeds of $40 million and direct spending of $12 million for payments to the affected jurisdictions.

Since 2013, DOI has conducted eight auctions of leases for offshore wind resources along the Atlantic coast, generating receipts of about $470 million. Taken together, the 15 existing leases cover nearly 1.6 million acres, suggesting an average size of about 100,000 acres each and an average value of $300 per acre. In reality, the values and acreage vary widely among leases, with the sizes ranging from less than 70,000 acres to almost 190,000 acres and prices ranging from less than $1 per acre to over $1,000 per acre.

Several factors suggest that the acreage leased in the Caribbean and South Pacific would be on the low end of that range at least for the next few years. For example, technological advances are needed to deploy systems that can withstand winds from category 5 hurricanes. Similarly, current technologies for producing electricity from offshore wind may not be economically viable for the comparatively small markets in those regions.[1] Despite those limitations, the cost of conventional fuels in those regions is much higher than on the U.S. mainland, which may increase the relative value of offshore wind to utilities or large customers like the Department of Defense.

CBO expects that any auctions carried out under H.R. 1014 would occur toward the end of the 10-year period covered by this estimate because it would take time to resolve technical and economic issues. Based on trends in the Atlantic, CBO estimates that the acreage leased over that period would have the potential to produce about 30 percent of the electricity used in those jurisdictions, or about 120,000 acres. [2] CBO also expects that the average value of that acreage would be similar to the prices paid in the Atlantic because of the comparatively high cost of other fuel supplies. Thus CBO estimates that the gross proceeds over the period would total about $40 million. For this estimate, CBO assumes that payments made to the affected jurisdictions would be made the year after proceeds are collected; those payments would total $12 million over the 2019-2029 period.

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1. According to the Energy Information Administration, the two largest electricity markets in these regions, Puerto Rico and Guam, used a total of 21 billion and 2 billion kilowatt-hours (kWh) in 2016, respectively That total is equivalent to about 3 percent of the electricity used by the Atlantic states with offshore leases. For data on electricity production for each jurisdiction, see Energy Information Administration, "U.S. States, State Profiles and Estimates: U.S. Overview" (accessed May 16, 2019), www.eia.gov/state/?sid=US. For more information on wind resources in the jurisdictions, see Frank Oteri and others, 2017 State of Wind Development in the United States by Region, National Renewable Energy Laboratory, NREL/TP-5000-70738 (April 2018), www.nrel.gov/docs/fy18osti/70738.pdf (6.3 MB).

2. CBO estimates that the annual resource potential for individual leases in the Atlantic ranges from about 3 billion kWh to almost 9 billion kWh, depending on the acreage of the lease. Thus, most or all of that demand could be supplied by one or two leases, assuming they are similar in size to those issued in the Atlantic. The estimated megawatt-hour values assumes an average of 3 megawatts of capacity per square kilometer and an average capacity factor of 45 percent. See Walt Musial, Principal Engineer and Manager of Offshore Wind, National Renewable Energy Laboratory, "Offshore Wind Energy Facility Characteristics," (presentation at BOEM's Offshore Wind and Maritime Industry Knowledge Exchange Workshop, March 5, 2018), https://go.usa.gov/xPfng (PDF, 2.1 MB).

Finally, H.R.1014 would authorize DOI to issue licenses to companies to explore and develop mineral resources in areas on the Outer Continental Shelf adjacent to any territory or possession of the United States. Based on the information available regarding economically recoverable mineral resources in those areas, CBO estimates that any proceeds from issuing such leases would be negligible over the 2019-2029 period.

Spending Subject to Appropriation

CBO estimates that implementing H.R. 1014 would have a discretionary cost of $3 million over the 2020-2024 period, mostly for the technical and environmental assessments of offshore wind and mineral development off the coasts of U.S. territories in the Caribbean and South Pacific. CBO also estimates that conducting lease sales in those areas would cost about $3 million but expects that such spending would occur after 2024.

Finally, the bill would authorize DOI to deposit 12.5 percent of the leasing proceeds in the Coastal Reef Conservation Fund; any spending of those amounts would be subject to appropriation. CBO estimates that spending from that fund would occur after 2024 and would total about $4 million over the 2025-2029 period.

Uncertainty

The estimated reductions in direct spending resulting from enacting H.R. 1014 could be higher or lower for several reasons:

- CBO cannot precisely predict the technical or economic feasibility of offshore wind systems in the Caribbean and South Pacific regions over the next 10 years. Proceeds from leasing could be higher if electricity from offshore wind systems becomes less expensive than alternative supplies but lower if current technological and market constraints continue. Similarly proceeds could be collected earlier or later than estimated, depending on the timing of such technological or economic changes.
- CBO also cannot predict with certainty what companies would be willing to pay for leases of offshore wind resources. The prices for leases off the Atlantic coast have varied widely, reflecting differences in the strategic interests of bidders as well as technical and market conditions.

Pay-As-You-Go Considerations

The Statutory Pay-As-You-Go Act of 2010 establishes budget-reporting and enforcement procedures for legislation affecting direct spending or revenues. The net changes in outlays that are subject to those pay-as-you-go procedures are shown in Table 2.

Table 2.
CBO's Estimate of Pay-As-You-Go Effects of H.R. 1014

	By Fiscal Year, Millions of Dollars											
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2019-2024	2019-2029
	Net Decrease in the Deficit												
Statutory Pay-As-You-Go Effect	0	0	0	0	0	0	-8	-5	-5	-5	-5	0	-28

Increase in Long-Term Deficits: None.

Mandates: None.

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