Appendix B. Assessment Methodology

This appendix describes OED's methodology to assess Permitting Dashboard data and progress toward BP implementation for FY 2020, reflected earlier in this report. OED has moved toward a more data-driven, scaled assessment approach to provide more detailed and nuanced information to Congress about the state of BP implementation and FAST-41 compliance across agencies. This appendix provides more detail, where necessary, on the data assessment included in Chapter 2 of this report to ensure clarity of interpretation.

Dashboard Data Assessment Framework

This section provides additional detail, where needed, on the methodology and underlying data for Chapter 2, Part 2 - OED Assessment of Project Portfolio and Permitting Timeframes for FAST-41 Covered Projects.

Potential FAST-41 Cost Savings

As noted in Chapter 1 - Permitting Council FY 2020 Accomplishments and Chapter 2, Part 1 – Project Highlights, the Gemini Solar project represents potential cost savings of up to $12.6 million. Please see below for details on this calculation.

The Gemini Solar EIS cost $6.2 million. Based on CEQ's environmental analysis cost estimation methodology, the EIS cost approximately $282,000 per month.

The NEPA process (NOI to ROD) for the Gemini Solar project was completed in 22 months. The NEPA process for the USACE-led Panoche Valley Solar project – the most comparable solar project documented in the RPS for 2020 – was completed in 43.68 months (NOI to ROD), representing a total time savings of 21.68 months (or 1.8 years) on the Gemini Solar project. This translates to a potential cost savings of $6.1 million (21.68 months saved multiplied by the cost estimation of $282,000 per month).

The maximum NEPA length (NOI to ROD) for renewable energy projects in the RPS for 2020 is 66.96 months (or 5.58 years). Comparing this maximum NEPA duration to the duration of Gemini Solar's NEPA process, an appropriate comparison given Gemini Solar is the largest of its kind in the U.S. and one of the largest in the world, 44.96 months (or 3.74 years) were saved on the Gemini Solar project. This translates to a potential cost savings of $12.6 million (44.96 months saved multiplied by the cost estimation of $282,000 per month).

The above calculations results in a potential cost savings range of $6.1 million to $12.6 million.

Scope of FAST-41 Project Portfolio

Figure 1 on page 10 provides a snapshot of the FY 2020 FAST-41 covered project portfolio. The 28 projects undergoing active Federal review in FY 2020 include projects that were at any time in FY 2020 neither canceled nor complete (see Table 3, below, for project status definitions). FAST-41 covered projects, since the inception of the program, have generated an investment value of $107 billion and have created 57,000 new jobs.

Figure 2 on page 11 presents only sectors in which there was at least one project as of the end of FY 2020. Therefore, it does not depict all FAST-41 sectors, which include the following: conventional energy production, renewable energy production, electricity transmission, surface transportation, aviation, ports and waterways, water resource projects, broadband, pipelines, and manufacturing.[47]

Project statuses presented in Figure 3 on page 11 are defined in Table 3, below. *Project status* refers to the overall status of the environmental review and authorization decision process, in contrast to *action status*, which refers to the status of any particular environmental review or authorization.

Table 3. Project status definitions.

Project Status	Definition
Planned	Applicable to any project posted to the Permitting Dashboard before the NOI or Notice of Schedule (for some FERC projects) is complete.
In Progress	Applicable to any project where the NOI or Notice of Schedule (for some FERC projects only) has been released.
Paused	A project may be paused when issues beyond the Federal government's control: (i) prevent any work from occurring and new milestone target completion dates cannot be identified across all actions; or (ii) significantly alter the scope of the project.
Complete	Applicable to any project where all environmental reviews and authorization decisions in a project's permitting timetable are complete.
Cancelled	A project may be cancelled for a variety of reasons, including when it is determined that the environmental review process is no longer necessary, inability to secure funding, or if it is no longer feasible.
Class of Action Changed	Applicable to DOT covered projects where the NEPA action has been down-scoped to a Categorical Exclusion, or for MIP-only projects where the EIS has been downscoped to an Environmental Assessment (EA) or Categorical Exclusion.

Continued Demand for FAST-41 Coverage and Permitting Council Services and Benefits

Seven projects were added to the FAST-41 portfolio of *active* projects in FY 2020 (i.e., not already completed or cancelled), increasing the FAST-41 active project portfolio from 21 projects to 28 projects. Newly added active projects now account for 25 percent of total active projects (7 new FINs divided by 28 total active projects in FY 2020 is equal to 25 percent). This represents a 33 percent increase in the active project portfolio in FY 2020 (7 new FINs divided by 21 active projects at the beginning of FY 2020 is equal to 33 percent).

Since 2017, the FAST-41 portfolio of projects grew from the 33 identified in the initial inventory to a total of 52 projects by the end of FY 2020, representing an increase of 19 projects that voluntarily applied for FAST-

[47] 42 U.S.C. § 4370m(6)(A)

41 coverage. This represents an increase of 58 percent (19 new FINs divided by the 33 initial inventory projects at the start of FY 2020).

A total of 30 FAST-41 projects have been completed. Ten of those projects were completed in FY 2020, and of the ten completed, six were inventory projects and four were voluntary projects.

Figure 4 and Figure 5 on page 12 both depict the growth in the FAST-41 project portfolio. Figure 4 shows growth since FAST-41's inception (i.e., since the establishment of the initial inventory of 33 projects) and Figure 5 shows growth occurring only during FY 2020. In other words, the projects added, their investment value, and jobs created in Figure 5 are a subset of the corresponding measures identified in Figure 4.

FAST-41 Implementation – Time Savings

The length of time required to complete an EIS in Figure 6 on page 14 is measured from the publication of the NOI to the issuance of the ROD.

The CEQ Reported Average Time to Complete an EIS (2010-2018) figure of 4.5 years is based on an analysis of 1,276 EISs for which a notice of availability of a final EIS was published between January 1, 2010, and December 31, 2018, and a ROD was issued by June 18, 2019. CEQ's underlying data is available at https://ceq.doe.gov/docs/nepa-practice/CEQ_EIS_Timelines_2020-6-12.xlsx.

The FAST-41 Projects (Voluntary Application - FIN) Average Time to Complete an EIS figure of 2.5 years is based on five FAST-41 covered projects that completed the NEPA process. These five projects include Alaska LNG, Borderlands Wind, Cardinal-Hickory Creek, Gemini Solar, and Jordan Cove. Jordan Cove has not yet completed its full environmental review and authorization process. Two of these projects—Alaska LNG and Gemini Solar—are the largest of their kind in the country in terms of the infrastructure's physical size and scale.

FAST-41 covered projects completing the NEPA process in FY 2020 did so in 45 percent less time than CEQ's 2010-2018 baseline (2.5 years versus 4.5 years, representing a time savings of 2 years). FAST-41 projects completing the NEPA process in FY 2020 also had increased time savings relative to FAST-41 projects completing the NEPA process in FY 2019 (2 years versus 1.5 years, representing a 33 percent increase).

On average, the Federal permitting process for voluntarily submitted FAST-41 covered projects was completed during FY 2020 within a month of the original FAST-41 permitting timetable. This figure was determined by comparing the average time difference between the original and actual permitting timetables.

On-Time Milestone Completion

Figure 10, below, shows the number of milestones for each project that have been completed on time, completed early, and completed at a later date. The figure also shows, for each project, the number of incomplete milestones that have been moved to a later date, milestones within actions that have been paused, and milestones that are in planned status as of the end of FY 2020. Projects that are in planned status are not included in this figure.

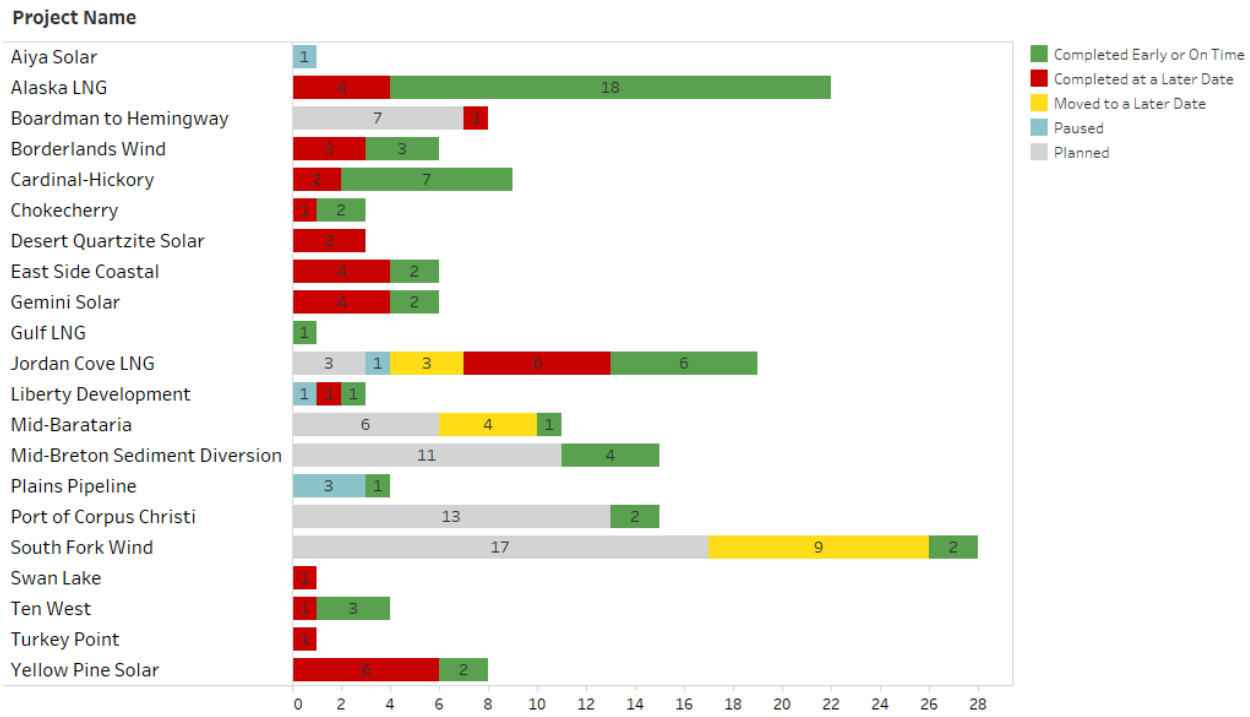

Figure 10. Chart. Timelines of milestone completion by project in FY 2020.

Reasons for Schedule Changes

Figure 11, below, shows the reasons for schedule modifications for FAST-41 covered projects that have changed milestone dates on the Permitting Dashboard in FY 2020. The figure illustrates, for each included project, the reason for each date change and the number of times that the reason was employed in FY 2020. The figure excludes covered projects that were completed or canceled before FY 2020. The reasons for date changes, with possible scenarios, are included in Table 4, which was adapted from the Data Management Guide.

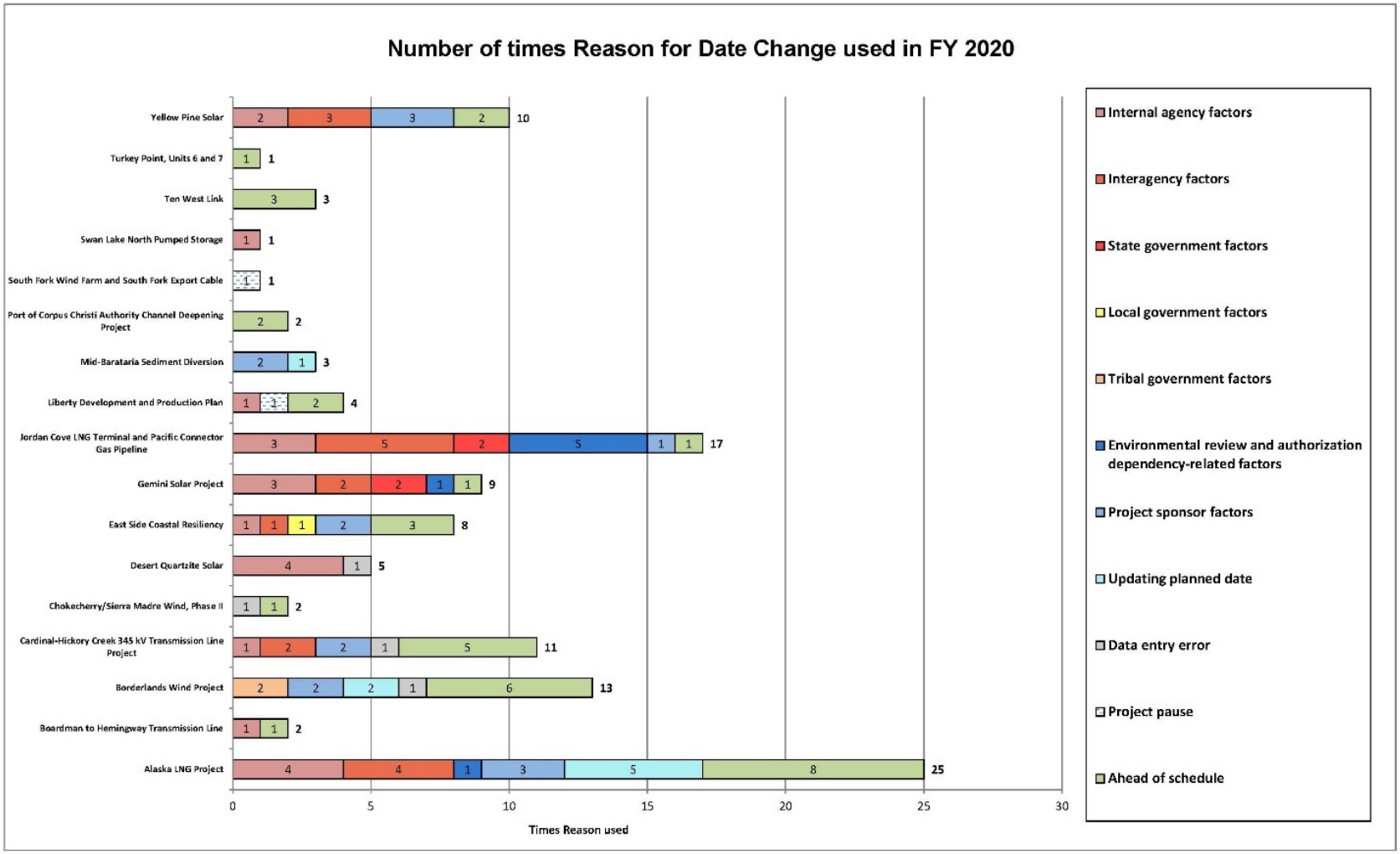

Figure 11. Chart. Reasons for date change used in FY 2020.

Table 4. Examples of scenarios for acceptable reasons for date change used in FY 2020.

Reasons for Date Change[48]	Possible Scenarios or Examples
Internal agency factors	There are agency capacity or resource issues. Additional time is required to comply with internal agency procedures or review processes. There are changes to an agency's policies, guidelines, or regulations. There is a lapse of Federal funding.
Interagency factors	There are delays in interagency coordination. There are interagency disputes. There are interagency communication issues.
State government factors	There are unresolved state trust land rights-of-way impact issues. There is a delay in a state environmental decision that is necessary for the Federal decision to proceed. There are unresolved state sovereignty issues for riparian and coastal lands, water, or fisheries.
Local government factors	There are unresolved conflicts with local, county, or city zoning. There are unresolved payment-in-lieu-of-tax issues. There are unresolved impacts on recreational or protected areas.
Tribal government factors	There are unresolved Tribal government economic, environmental, or realty concerns about a project. There are unresolved cultural resources or religious issues. There are unresolved impacts on water, mineral, oil and gas rights, or aboriginal hunting or fishing rights. There are unresolved Bureau of Indian Affairs concerns, or legal and policy issues involving project impacts on Native American or Alaska Native communities.
Project sponsor factors	A project sponsor needs more time to submit required information to an agency. There are financing issues identified by the project sponsor.
Environmental review and authorization milestone dependency-related factors	A milestone in one action is dependent upon another milestone date in another Federal action in the timetable that has been changed. (For example, a consultation period cannot begin until the

[48] The other permissible reasons for a date change, not used in FY 2020, are natural disasters, national emergency, and pending legal action.

	application or request to initiate consultation is deemed "complete.")
Ahead of schedule	A milestone was completed ahead of schedule and will be updated with an earlier completion date.
Data entry error	A milestone target completion date was entered erroneously (e.g., wrong calendar year).
Project pause	The milestone date needs to be changed due to a project being in "Paused" status, when project enters paused status.
Updating planned date	The milestone date needs to be changed due to an updated estimated start date. (This reason for date change is only available if the action status is "Planned.")

Impacts of Schedule Changes

Figure 8 on page 18 compares, for FAST-41 covered projects categorized by lead agency, the original target length of a project to the current length of the project (calculated in months at the close of FY 2020). The original target length of the project is calculated as the time (in months) between the original target NOI date and the last action date for the project. The figure indicates whether the project is completed, or in paused, planned, or in progress status. Completed projects' actual permitting timetables are final. The actual lengths of the permitting timetables for projects in paused status will change once the permitting process resumes, and therefore the comparison portrayed in the graphic is not final. Projects in planned status are indicated as such in the figure; these projects are included in the figure to illustrate the full project portfolio for FY 2020, and to identify the projects that have yet to establish complete permitting timetables per 42 U.S.C. §§ 4370m-2(c)(1)&(2). The figure includes actions in planned status, as well as milestones that were added to the permitting timetable after the initial permitting timetable was developed. This figure excludes actions canceled before or during FY 2020, projects canceled before or during FY 2020, and projects completed before FY 2020.

FY 2020 Project Performance Relative to Recommended Performance Schedules

Figure 9 on page 20 portrays the current EIS completion length (in years) for projects in the pipeline, electricity, and renewable energy sectors that were completed in FY 2020, and compares them to the average lengths for projects in the three sectors as determined in the 2020 RPS. The additional bars in each graphic show, for each sector, the maximum and minimum timeframes in the RPS. These figures exclude inventory projects.

Table 6, below, describes whether FAST-41 covered projects paused, planned, in progress, or completed during FY 2020 met the RPS for each applicable environmental review and authorization action. The table shows the action status for each action in a project's permitting schedule, excluding actions that have been canceled. For each action, the table compares the current actual length, or the total length to complete that

action (in years), to the average timeframe for that action (in years), determined in the 2020 RPS. The table concludes, based on this comparison, whether the action is ahead of or behind the average RPS timeframe.

Timeliness of dashboard data updates

Table 5, below, illustrates, for each project, the timeliness of updates to milestone dates on the Permitting Dashboard. The figure indicates the number of times milestone dates for a project were updated in a timely manner or missed a date. *Timely Update* is used for milestones, both completed and not completed, whose current target date is updated on time. *Missed Date* is used for milestones that are completed after their target completion date (without a valid extension) or where extension was published within 30 days of their scheduled completion date.[49] The figure excludes planned projects whose completed milestones were uploaded to the Dashboard on the timetable publication date.

Project Name	Timely Update	Missed Date
Aiya Solar	0	0
Alaska LNG	13	9
Boardman to Hemingway	0	1
Borderlands Wind	2	4
Cardinal-Hickory	4	5
Chokecherry	1	2
Desert Quartzite Solar	0	3
East Side Coastal	1	5
Gemini Solar	2	4
Gulf LNG	1	0
Jordan Cove LNG	8	7
Liberty Development	1	1
Mid-Barataria	5	0
Mid-Breton	0	4
Plains Pipeline	0	1
Port of Corpus Christi	2	0
South Fork Wind	11	0
Swan Lake	0	1
Ten West	3	1
Turkey Point	0	1
Yellow Pine Solar	0	8

Table 5. Timeliness of milestone update by project in FY 2020.

[49] Extensions to milestone target completion dates may not be published within the 30 days prior to the completion date (42 U.S.C. §4370m-2(c)(2)(D)(ii)). Because no extension can be made during this period, if the agency does not complete the milestone by the prior completion date then the milestone will be counted as a "Missed Date."

Table 6. Projects meeting RPS for each environmental review and authorization action.

Project	Lead Agency	Project Status	Action	Action Responsible Agency	Action Status	Avg. RPS (in years)	Action Completed/ Current Length (in years)	RPS Status
Alaska LNG Project	FERC	Complete	ESA Consultation (DOI-FWS)	FWS	Complete	0.5	0.93	Behind RPS
			ESA Consultation (NOAA-NMFS)	NOAA	Complete	0.32	0.93	Behind RPS
			EIS	FERC	Complete	2.42	3.05	Behind RPS
			ROW Authorization (DOI-BLM)	BLM	Complete	3.47	3.34	Ahead of RPS
			Section 10 RHA of 1899 and Section 404 CWA	USACE - Regulatory	Complete	0.82	0.53	Ahead of RPS
			Section 106 Review	FERC	Complete	2.11	3.19	Behind RPS
Bay State Wind Project	DOI	Planned	ESA Consultation (DOI-FWS)	FWS	Planned	0.49		
			EIS	BOEM	Planned	2.3		
			Section 10 RHA of 1899 and Section 404 CWA	USACE - Regulatory	Planned	1.07		
Boardman to Hemingway Transmission Line	DOI	In Progress	ESA Consultation (DOI-FWS)	FWS	Complete	0.7	1.45	Behind RPS
			EIS	BLM	Complete	3.31	7.31	Behind RPS
			ROW Authorization (DOI-BLM)	BLM	Complete	4.05	7.76	Behind RPS
			Section 106 Review	BLM	Complete	3.14	6.52	Behind RPS
			Section 404 Clean Water Act	USACE - Regulatory	Planned	0.22	0.5	Behind RPS
			Special Use Permit (FS)	USFS	Complete	6.14	10.45	Behind RPS

Borderlands Wind Project	DOI	Complete	ESA Consultation (DOI-FWS)	BLM	Complete	0.49	0.05	Ahead of RPS
			EIS	BLM	Complete	2.3	1.73	Ahead of RPS
			ROW Authorization (DOI-BLM)	BLM	Complete	3.11	3.24	Behind RPS
			Section 106 Review	BLM	Complete	1.59	1.97	Behind RPS
Cardinal-Hickory Creek 345 kV Transmission Line Project	USDA	Complete	ESA Consultation (DOI-FWS)	FWS	Complete	0.7	1.02	Behind RPS
			EIS	USDA - RD	Complete	3.31	3.25	Ahead of RPS
			Section 106 Review	USDA - RD	Complete	3.14	2.06	Ahead of RPS
			Section 404 Clean Water Act	USACE - Regulatory	Complete	0.22	0.25	Behind RPS
Chokecherry/Sierra Madre Wind, Phase II	DOI	Complete	ROW Authorization (DOI-BLM)	BLM	Complete	3.11	11.98	Behind RPS
Desert Quartzite Solar	DOI	Complete	ESA Consultation (DOI-FWS)	FWS	Complete	0.49	0.47	Ahead of RPS
			EIS	BLM	Complete	2.3	4.84	Behind RPS
			ROW Authorization (DOI-BLM)	BLM	Complete	3.11	8.42	Behind RPS
			Section 106 Review	BLM	Complete	1.59	3.15	Behind RPS
Gemini Solar Project	DOI	Complete	ESA Consultation (DOI-FWS)	FWS	Complete	0.49	0.39	Ahead of RPS
			EIS	BLM	Complete	2.3	1.82	Ahead of RPS
			ROW Authorization (DOI-BLM)	BLM	Complete	3.11	12.42	Behind RPS
			Section 106 Review	BLM	Complete	1.59	1.79	Behind RPS

			Section 404 Clean Water Act	USACE - Regulatory	Complete	1.07	1	Ahead of RPS
Jordan Cove LNG Terminal and Pacific Connector Gas Pipeline	FERC	In Progress	ESA Consultation (DOI-FWS)	FWS	Complete	0.5	0.47	Ahead of RPS
			ESA Consultation (NOAA-NMFS)	NOAA	Complete	0.32	0.45	Behind RPS
			EIS	FERC	Complete	2.42	2.45	Behind RPS
			ROW Authorization (DOI-BLM)	BLM	Paused	3.47	13.81	Behind RPS
			Section 10 RHA of 1899 and Section 404 CWA	USACE - Regulatory	In Progress	0.82	2.84	Behind RPS
			Section 106 Review	FERC	Complete	2.11	2.82	Behind RPS
Lake Elsinore Advanced Pumped Storage Project	FERC	In Progress	ESA Consultation (DOI-FWS)	FWS	Planned	0.49	0.37	Ahead of RPS
			EIS	FERC	In Progress	2.3	1.75	Ahead of RPS
			Section 106 Review	FERC	In Progress	1.59	4.46	Behind RPS
			Section 404 Clean Water Act	USACE - Regulatory	Planned	1.07	1.39	Behind RPS
Ocean Wind Project	DOI	Planned	EIS	BOEM	Planned	2.3		
PennEast Pipeline	FERC	In Progress	ESA Consultation (DOI-FWS)	FWS	Complete	0.5	0.36	Ahead of RPS
			EIS	FERC	Complete	2.42	2.28	Ahead of RPS
			Section 10 RHA of 1899 and Section 404 CWA	USACE - Regulatory	Paused	0.82	2.14	Behind RPS
			Section 106 Review	FERC	Paused	2.11	0	
Revolution Wind Farm Project	DOI	Planned	EIS	BOEM	Planned	2.3		

South Fork Wind Farm and South Fork Export Cable	DOI	In Progress	ESA Consultation (DOI-FWS)	FWS	Planned	0.49	0.37	Ahead of RPS
			EIS	BOEM	In Progress	2.3	3	Behind RPS
			Section 10 RHA of 1899 and Section 404 CWA	USACE - Regulatory	Planned	1.07	1.07	Meeting RPS
			Section 106 Review	BOEM	In Progress	1.59	1.31	Ahead of RPS
Sunrise Wind Farm	DOI	Planned	EIS	BOEM	Planned	2.3		
Swan Lake North Pumped Storage	FERC	Complete	ESA Consultation (DOI-FWS)	FWS	Complete	0.49	0.05	Ahead of RPS
			EIS	FERC	Complete	2.3	2.81	Behind RPS
			ROW Authorization (DOI-BLM)	BLM	Complete	3.11	2.24	Ahead of RPS
			Section 106 Review	FERC	Complete	1.59	3.51	Behind RPS
Ten West Link	DOI	Complete	ESA Consultation (DOI-FWS)	FWS	Complete	0.7	0.11	Ahead of RPS
			EIS	BLM	Complete	3.31	3.66	Behind RPS
			ROW Authorization (DOI-BLM)	BLM	Complete	4.05	4.44	Behind RPS
			Section 106 Review	BLM	Complete	3.14	3.59	Behind RPS
Yellow Pine Solar	DOI	In Progress	ESA Consultation (DOI-FWS)	FWS	Complete	0.49	0.52	Behind RPS
			EIS	BLM	In Progress	2.3	2.43	Behind RPS
			ROW Authorization (DOI-BLM)	BLM	In Progress	3.11	9.17	Behind RPS
			Section 106 Review	BLM	Complete	1.59	0.83	Ahead of RPS

BP Assessment Framework

On May 11, 2020 OED published the FY 2020 Best Practices Report. This report was developed in consultation with permitting council member agencies. In the report, OED determined that a qualitative, performance-based approach towards assessing BP implementation would better focus resources on executing activities that improve project permitting performance and timelines. The report included a template of the FY 2020 agency self-assessment template. For ease of agency reporting, OED created a fillable PDF form of the self-assessment template (see Appendix A for an example). To ensure consistency in reporting for the FY 2020 ARC, OED requested that each agency discuss how they have addressed the general intent of each statutory category identified under 42 U.S.C. § 4370m-1(c)(2)(B), or otherwise indicate why the BP category was not relevant to the agency. This was intended to ensure that all of the Permitting Council agencies' efforts toward implementing the BPs were captured, and that agencies were assessed consistently.

For FY 2020, OED evaluated agency BP implementation by statutory BP category.[50] If an agency submitted an example within a BP category, they received credit in Table 1 to indicate that the agency has made strides in implementing the overall statutory category. The table indicates if an agency submitted multiple examples per BP category or per specific BP so that agencies could be credited for multiple efforts toward implementation of a BP category. Agencies that submitted multiple examples within a BP category were assessed in Table 1 on what OED felt was their strongest example. OED also encouraged agencies to submit examples of specific best practices that are unique to an agency (i.e., could not be captured in the existing Permitting Council-issued best practices)—this ensured that agency efforts that fell outside existing BPs could be captured and credited appropriately. Agency-specific BP examples are indicated as such in the table.

OED scaled its evaluation of agency submissions rather than using the pass/not applicable evaluation approach used in previous years. This scaled approach allows OED to more precisely evaluate and give credit to agency efforts based on maturity of implementation and the value that agency efforts have in the permitting process. The evaluation scale is as follows:

- Not relevant: The agency submitted a justification for why the category was not relevant in FY 2020.
- No improvement or no action taken: The agency submitted an example of an effort that is not new to FY 2020; the submission does not reflect any updates, improvements, or enhancements in FY 2020. If an agency did not submit an example for a BP and did not justify why the BP is not relevant to them in FY 2020, the agency received no improvement or action taken.
- New initiative: The agency submitted an example of a new effort developed in FY 2020, but will be launched after FY 2020.

[50] While DOT is a member of the Permitting Council, DOT is not subject to FAST-41 requirements, including applicable best practices. *See* Pub. L. No. 114-94, § 11503(b) (Dec. 4, 2015). Nonetheless, DOT actively participates and provides input on best practices and the ARC to comply with reporting requirements pursuant to EO 13807, Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects, 82 FR 40463 (Aug. 15, 2017).

- Actions taken toward implementation: The agency submitted an example of an effort that furthers implementation of the best practice in FY 2020, such as workshops, new or updated guidance or policies, enhancements to existing programs, policies, or guidance, among others.
- Measurable improvements as a result of implementation: The agency submitted an example of a mature implementation effort with demonstrated value in the form of quantitative data or qualitative value or impact statements in FY 2020.