

Powering Past Coal Task Force - Master Schedule

Summary

This document is a master schedule to provide a common operating picture of the overall progress to replace the electricity currently provided by the coal plant. On the next page, the grey line items are PUC approved measures. Lines beneath these may be projects or initiatives that fall under each PUC docket. Colored boxes indicate key milestones or project commercial operation dates.

Purpose

On March 30, 2021, by [Executive Order 21-01](#), Governor David Ige established the Powering Past Coal Task Force to convene stakeholders to increase transparency, coordination, collaboration, and urgency to timely facilitate, coordinate, and align the reviews and approvals needed for the measures and projects that the PUC approved to replace the electricity and grid stability currently provided by Hawai'i's last coal-fired power plant, located on O'ahu.

To achieve the Task Force objectives, a primary activity of the Task Force is to develop and maintain a [Master Schedule](#), as shown on next page, which provides a timeline and status summary of the measures and projects needed to replace the coal plant with renewable energy.

These measures and projects will collectively support O'ahu's transition away from fossil fuels.

The coal plant's generation capacity is **180 MW** and in 2020 it provided **16% of O'ahu's electrical energy**; notably, providing more energy during peak and non-daylight hours. It has been operating since 1992.

The Task Force is chaired by the Chief Energy Officer of the Hawai'i State Energy Office and includes members from State and City and County of Honolulu government, the Hawai'i State Legislature, Hawaiian Electric, renewable energy development companies, and energy-related public interest groups.

The Task Force is not a policy-making or decision-making body and does not pursue statutory or administrative rule changes.

The coal plant is planned for retirement on **SEPTEMBER 1, 2022**, as indicated by the vertical **black line** in the Master Schedule. State law prohibits the use of coal for power generation in Hawai'i after December 31, 2022.

Terms and Abbreviations Used

COD - Commercial Operations Date - Target date for a project to begin commercial operations.

Force Majeure - Contract clause that removes liability to parties for unavoidable and unexpected events that prevent parties from fulfilling contractual obligations (e.g., unforeseen supply shortages or natural disasters).

GCOD - Guaranteed Commercial Operations Date - Contractually binding date for a project to begin commercial operations.

HECO - Hawaiian Electric Company - The only electric utility servicing the island of O'ahu, part of Hawaiian Electric.

IRS - Interconnection Requirements Study - A study to establish the requirements for interconnection of a Generating Facility with the HECO's Distribution System

MW - Megawatt - Measurement of power, capacity, or demand. Represented below as *generating capacity* of a project.

PPA - Power Purchase Agreement - A contract for an electric utility to purchase energy and or capacity from a commercial source (e.g., utility scale solar project) at a predetermined price or based on pre-determined pricing formulas.

PUC - Hawai'i Public Utilities Commission

RPS - [Renewable Portfolio Standard](#) - A goal for the percentage of **electricity sales** in Hawai'i to be derived from renewable energy sources.

Hawai'i RPS = 100% renewable energy for electricity consumption by 2045

Utility RPS - The percentage of a utility's electricity sales that comes from renewable energy. In the case of Hawaiian Electric, its Utility RPS is a combination of the three electric utilities servicing O'ahu, Maui County (Maui, Moloka'i, Lāna'i), and Hawai'i island: respectively, Hawaiian Electric Company (HECO), Maui Electric Company (MECO), and Hawai'i Electric Light Company (HELCO).

Schedule Legend

Green = Accelerated COD or GCOD	Yellow = Original Proposed GCOD	Red = Delayed COD or GCOD
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Disclaimer: *The information represented below is public and can be found within the PUC dockets. The project schedule is evolving—what is represented on the next page is subject to future additions and changes. For the most up-to-date information on the status of each project, HSEO recommends referencing the PUC dockets and/or appropriate agencies regarding the status of their approvals. Additional information can be found in the individual PUC dockets and on the project webpages, all of which are linked within the schedule on the next page.*

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PUC Docket Number and Link	PUC Approved Measures to Replace Generation and Capacity of the Coal Plant	Project or Task Updates	Next Steps / Key Deadline Dates if Applicable	Production Capacity (MW)	Estimated Utility RPS Percent Contribution	Coal Plant Retirement 9-1-22																	
						22-May	22-Jun	22-Jul	22-Aug	22-Sep	22-Oct	22-Nov	22-Dec	23-Jan	23-Feb	23-Mar	23-Apr	23-May	23-Jun	23-Jul	23-Aug	23-Sep	23-Oct
2021-0024 Utility-Scale Projects (Stage 1 and 2)																							
2019-0050	AES West O'ahu Solar (Stage 1)	<ul style="list-style-type: none"> Construction anticipated to start Sep/Oct 2021 Special Use Permit (SUP) approved by Land Use Commission (LUC) 6-9-21. CUP-Minor decision and order issues by DPP 6-22-21. AES monitoring supply chain issues due to COVID. 	<ul style="list-style-type: none"> August-September: Estimate sending easement to land court (AES to DLNR - Bureau of Conveyances) Q3/Q4-21: Building and Electrical Permit (DPP) Q3/Q4-21: Noise Permit (DOH Radiological Health) Q3/Q4-21: Grading Permit (DPP) 	12.5	0.4																		
2018-0434	Milliani 1 Solar (Stage 1)	<ul style="list-style-type: none"> Construction started; ongoing work includes pile installation for PV arrays and inverter station, underground cabling, combiner box mounting, and substation foundation work. Parties working to complete PPA amendment negotiations to potentially accelerate the GCOD. HECO is reviewing proposed new project schedule to determine feasibility; final price proposal (3% increase or more) to be based on new schedule. PPA Amendment under review of Clearway's financing parties, to be submitted to the PUC 8-6-21 (requested 2-week extension from 7-23-21); extension requested to determine the extent of supply delays. 	<ul style="list-style-type: none"> 8-6-21: Clearway submitted PPA amendment to PUC (Clearway) 10-8-21: Requesting decision from PUC on or before 10-8-21 for approval of PPA amendment (PUC) 	39	1.2																		
2020-0136	Kapolei Energy Storage (KES) (Stage 2)	<ul style="list-style-type: none"> Construction anticipated to start Q1-22. Battery supplier cannot guarantee delivery until Aug-22, delaying initial GCOD under Force Majeure condition. 138 kV overhead line application filed 6-21-21; project needs IRS amendment and overhead line approval by 9-1-21 for financial closing process. KES is looking at rolling commissioning by looking at each battery as it's installed and hooked up. System Impact Study (SIS) completed and provided to developer 6-21-21; post-SIS partial re-study required, anticipated to be completed end of Aug-21; not anticipated to impact the interconnection facilities or project schedule. Interconnection Requirements Study (IRS) began 6-25-21; completion expected 8-11-21. 	<ul style="list-style-type: none"> 8-11-21: IRS Amendment Filing Date (KES, HECO) 9-1-21: Overhead line approval request date (PUC) 11-15-21: Construction financing milestone, ability to draw funds or financial capability to construct project shall be documented (KES) Q1-22: Grading, Grubbing, and Building Permits anticipated to be filed w/ DPP (KES) 	185 (Storage)	0.1																		
2018-0435	Waiawa Solar (Stage 1)	<ul style="list-style-type: none"> Construction started; PCS pile installation began and is ongoing. Parties working to complete PPA amendment negotiations to potentially accelerate the GCOD. HECO is reviewing proposed new project schedule to determine feasibility; final price proposal (3% increase or more) to be based on new schedule. Two suppliers have notified Clearway Energy of Delays; "seller supply delays" are a significant concern. PPA Amendment under review of Clearway's financing parties, to be submitted to the PUC 8-6-21 (requested 2-week extension from 7-23-21); extension requested to determine the extent of supply delays. 	<ul style="list-style-type: none"> 8-6-21: Clearway to submit PPA amendment to PUC (Clearway) 10-8-21: Requesting decision from PUC on or before 10-8-21 for approval of PPA amendment (PUC) 	36	1.2																		
2020-0139	Mountain View Solar (Stage 2)	<ul style="list-style-type: none"> Currently on target to meet GCOD. Continuing Cultural Impact Assessment, project layout and design, and studies. HECO and AES working on early engineering agreement for interconnection facilities; construction anticipated to start Q2-22. 	<ul style="list-style-type: none"> Sep-21: Next public meeting estimated (AES) Jul-21: Early engineering review needed to start (HECO) Aug-21: Start negotiation for IRS amendment (AES and HECO) 	7	0.3																		
2020-0138	Kupehau Solar (Stage 2)	<ul style="list-style-type: none"> Joint interconnection with Ho'ohana resulted in delays to the COD of approximately 1 year beyond 5/31/2022 (original GCOD). Developer 60% design (Ho'ohana) package submitted 7-14-21, slipped from 6-3-21 (Note: Kupehau sharing Ho'ohana interconnection so review of Ho'ohana's design package covers Kupehau as well). 174 Power Global monitoring supply chain issues related to Withhold Release Order by U.S. Customs and Border Protection. Construction anticipated to start Q1-22. 	<ul style="list-style-type: none"> Jul-21: Final Facility Study expected to be completed (HECO) 	60	1.3																		
2018-0431	Ho'ohana Solar 1 (Stage 1)	<ul style="list-style-type: none"> Currently on target to meet GCOD 60% Switchyard Design submitted 7-14-21; 90% Switchyard Design Due 10-6-21, slipped to 11-15-21; delay as a result of extended engineering / design cycle; delay should not impact COD. Kahe-Wai'au 138 kV underground line application filed 6-15-21; Wai'au-Milliani 46kV underground-overhead line relocation application filed 6-18-21. System impact re-study for the point of interconnection (POI) change was completed and report was provided on 6-28-21. 174 Power Global monitoring supply chain issues related to Withhold Release Order by U.S. Customs and Border Protection, relating to materials contained in solar panels. Construction anticipated to start Q1-22. 	<ul style="list-style-type: none"> 11-15-21: 90% Switchyard Design drawings, expected (174PG) Oct-21: Grading/NPDES Permit (Solar/Battery) (DPP/DOH - CWB) 	52	1.4																		
2020-0137	Waiawa Phase 2 Solar (Stage 2)	<ul style="list-style-type: none"> Currently on target to meet GCOD. Identified risks include line extension conflicts with Waiawa State 1 project and need for breaker replacement (system work) at Waiawa substation. Construction anticipated to start Q4-2021 - Q2-2023. 	<ul style="list-style-type: none"> Jul-21: Engineering review needs to start (HECO) Q4-21 to Q1-22: CUP-Minor, Zoning Waiver, Building, Grading Permits anticipated (DPP) 	30	1.2																		
2020-0140	Mahi Solar (Stage 2)	<ul style="list-style-type: none"> Currently on target to meet GCOD. Special Use Permit (SUP) unanimously approved by CCH Planning Commission 6-23-21. System Impact Study (SIS) completed and provided 6-21-21; post-SIS partial restudy will be performed for a model update. Final Facility Study expected to be completed Jul-21. Construction anticipated to start Q1-22 - Q1-23. 	<ul style="list-style-type: none"> 8-2-21: PPA Amendment to PUC (HECO and Longroad) 8-28-21: Concurrence on Archeological Assessment, requested date of concurrence end of August (DLNR-SHPD) 9-10-21: Tentatively scheduled hearing with the Land Use Commission for Special Use Permit (SUP) (Longroad and LUC) 10-29-21: Submit Interconnection Requirements to PUC (HECO) 	120	3.1																		
Sum Online Before Coal Plant Retirement Based on Current GCOD (Includes project's with advanced timeline)				111.5	3.0																		
Sum All Projects				356.5	10.2																		
2019-0323 Distributed Energy Resources (DER)																							
		<ul style="list-style-type: none"> PUC issued Decision and Order on 6-8-21 for HECO to implement a Schedule Dispatch Program (SDP) for commercial and residential rooftop photovoltaic systems. The program incentivizes new and existing DER tariff customer generators to install battery storage for existing or added photovoltaic systems. New battery systems will discharge on a scheduled basis during peak hours. HSEO attempting to get better understanding of type, volume, and timing needed for new or retrofit PV + battery installations to reach 50MW by target date of Sep-22, or enrollment end date of Jun-23. Need to work with stakeholders to develop strategy to ensure timely permitting and interconnection. 	<ul style="list-style-type: none"> 7-19-21: Battery Plus program officially announced by HECO Aug-21: HECO to give first update on enrollment 	50	TBD																		
2018-0163 Microgrid Services Tariff*																							
		<ul style="list-style-type: none"> PUC issued Decision and Order approving microgrid tariff 5-17-21. HECO submitted microgrid tariff 5-27-21; the Microgrid Services Tariff is intended to encourage and facilitate the development and use of new microgrids throughout Hawaii, with the exception of Kauai. A microgrid is defined as a group of interconnected loads and distributed energy resources within clearly defined electrical boundaries that acts as a single self-governing controllable entity with respect to the utility's electrical grid and is connected to a public utility's electrical grid to operate in "grid connected mode", or can disconnect to operate in "island mode". 		TBD	TBD																		
2015-0389 2018-0195 Community-Based Renewable Energy (CBRE) / Shared Solar																							
	Phase 1	<ul style="list-style-type: none"> CBRE Phase 1: All projects GCODs are on track or have been achieved to date. Three (3) O'ahu projects, totaling 4.99MW capacity. 		4.99 (current sum)	TBD																		
	Phase 2	<ul style="list-style-type: none"> CBRE Phase 2: 07-27-21 PUC issues decision and order approving CBRE filings; should be ready for subscriber enrollment in 2022. Capacity limit is 180 MW. Hawaiian Electric has application capacities of 75 MW Large Projects, 15 MW Small Projects, with one (1) minimum 1 uncapped Project 	<ul style="list-style-type: none"> 8-25-21: Deadline for HECO to file finalized RFPs, Rule 29 tariffs, and supporting documents (HECO) 	TBD	TBD																		
2007-0323 Energy Efficiency / Public Benefits Fund *																							
		<ul style="list-style-type: none"> Docket includes energy efficiency measures that serve to decrease electricity sales and defer or decrease the need for plant investment. The negative number shown in the next column indicates the estimated decrease in required production capacity that can be achieved through energy efficiency programs and demand side management. This measure is administered through a third party, Hawaii Energy. 		-45	TBD																		
2017-0352 O'ahu Grid Services RFP *																							
2014-0135 Distributed Generation (Rooftop PV) / Green Energy Market Securitization (GEMS) *																							
2007-0341 Demand Side Response / Grid Services Purchase Agreements *																							

* These measures are not currently items that are Task Force priority; however, they play an important role in ensuring O'ahu meets the production capacity requirements necessary to retire the coal plant and meet renewable energy goals. Measures may be brought to the Task Force should the need arise.