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 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.

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.

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.

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 - <u>Renewable Portfolio Standard</u> - 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 | Yellow = Original Proposed | Red = Delayed COD or |
|-------------------------|----------------------------|----------------------|
| or GCOD | GCOD | GCOD |

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 | Project or Tack Undates | Production Capacity (MW) | Estimated Utility RPS Percent | 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 2 | 23-Oct 23-N | Nov 23-Dec |
|----------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------|------------------|----------------------------|-----------------------------|-----------------------------------------------------|-----------------------------|------------------------------|-----------------|-------------------------|--------|--------|--------|--------|-----------------|-------------------------------|-------------------|-----------------|------------------|------------------|------------------|
| 2021-0024 | Plant Utility-Scale Projects (St | tage 1 and 2) | (IVIVV) | Contribution | | | | | nent - | | | | | | | | | | | | | | |
| <u>2019-0050</u> | AES West O'ahu Solar (Stage 1) | SUP approved by LUC 6-10-21. Construction anticipated to start Sep-21 or Oct-21. | 12.5 | 0.4 | | | | | GCOD 9-7-22 | | | | | | | | | | | | | | |
| 2020-0136 | Kapolei Energy Storage (Stage 2) | Battery supplier cannot guarantee delivery until Aug-22, delaying initial GCOD. 138 kV overhead line application filed 6-21-21. Project needs Interconnection Requirements Study (IRS) amendment and overhead line approval by 9-1-21 for financial closing. KES is looking at rolling commissioning by looking at each battery as it is installed and hooked up. Construction anticipated to start Q4-21. | | 0.1 | | Original GCOD 6-1-22 | | | Coal Plan | New COD Early delivery | | New GCOD 12-30-22 | | | | | | | | | | | |
| 2018-0434 | Mililani I Solar (Stage 1) | Construction started. 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. | 39 | 1.2 | | | Proposed GCOD 7-31-22 | | | | GCOD 11-1-22 | | | | | | | | | | | | |
| 2020-0137 | Waiawa Solar (Stage 1) | Construction started. 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. | 36 | 1.2 | | | | | Proposed GCOD 9-30-22 | i | | GCOD 12-1-22 | | | | | | | | | | | |
| 2020-0139 | Mountain View Solar (Stage 2) | Continuing Cultural Impact Assessment, project layout and design, and studies. Next public meeting estimated Sep-21 (date TBD). HECO - AES working on early engineering agreement for interconnection facilities. Construction anticipated to start Q2-22. | 7 | 0.3 | | | | | | | | | | | | | GCOD 5-17-23 | | | | | | |
| 2020-0138 | Kupehau Solar (Stage 2) | Joint interconnection with Ho'ohana resulted in delays. Developer 60% design (Ho'ohana) package due 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). Construction anticipated to start Q1-22. | 60 | 1.3 | Original GCOD | | | | | | | | | | | | | | New COD 7-1-23 | | | | |
| 2018-0431 | Ho'ohana Solar 1 (Stage 1) | Kahe-Halawa #1 138 kV overhead line application filed 2-26-21. Wai'au-Mililani 46kV underground-overhead line relocation application filed 6-18-21. Kahe-Waiau 138 kV underground line application filed 6-15-21. Construction anticipated to start Q1-22. | 52 | 1.4 | | | | | | | | | | | | | | | | GCOD 8-31-23 | | | |
| 2020-0137 | Waiawa Phase 2 Solar (Stage 2) | Continuing Project layout, design and studies; working with landowner on Land Use Commission petition for later this year. HECO and AES working on early engineering agreement for interconnection facilities. Construction anticipated to start Q2-22. | 30 | 1.2 | | | | | | | | | | | | | | | | | | GCOD .0-30-23 | |
| 2020-0140 | Mahi Solar (Stage 2) | SUP unanimously approved by Planning Commission 6-23-21. Targeting Aug-21 LUC agenda. Updated pricing proposal with accelerated GCOD submitted to Hawaiian Electric 6-17-21. Construction anticipated to start Q1-22. | 120 | 3.1 | | | | | | | | | | | | | | | Proposed COD | | Proposed GCOD | | GCOD 12-31-23 |
| 2019-0323 | SUM: Distributed Energy Reso | ources (DER) | 356.5 | 10.2 | | | | | | | | | | | | | | | | | | | |
| | | 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. HSEO needs to work with stakeholders to develop strategy to ensure timely permitting and interconnection. | 50 | TBD | | | | Minimum capacity required per HNEI 36MW | | | | | | | | | | Program Enrollment Ends | t | | | | |
| 2018-0163 | Microgrid Services Tariff | F* | TBD | TBD | | | | | | | | | | | | | | | | | | | |
| | | PUC issued Decision and Order approving microgrid tariff 5-17-21. Hawaiian Electric submitted microgrid tariff 5-27-21. The Microgrid Services Tariff is intended to encourage and facilitate the development and use of new microgrids throughout Hawai'i, with the exception of Kaua'i. 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". | TBU | IBU | | | | | | | | | | | | | | | | | | | |
| 2007-0323 | Energy Efficiency / Publi | ic Benefits Fund * | 45 | TDD | · | | | | | | | | | | | | | | | | | | |
| | | 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 | Oʻahu Grid Services RFP | | 60 | TBD | | | | | | | | | | | | | | | | | | | |
| 2014-0135 | Distributed Generation (| (Rooftop PV) / Green Energy Market Securitization (GEMS) * | Juu | | | | | | | | | | | | | | | | | | | | |
| 2018-0195 | Community-Based Rene | wable Energy (CBRE) / Shared Solar * | | TBD | | | | | | | | | | | | | | | | | | | |
| | Demand Side Response | / Grid Services Purchase Agreements * | | TBD | | | | | | | | | | | | | | | | | | | |
| 2007-0341 | | | | | | | | | | | | | | | | | | | | | | | |

^{*} 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.