

# 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.

**COIF** - Company Owned Interconnection Facilities

**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 (Updated January 2022)

Green = On Target to Meet GCOD	Yellow = At Risk of Meeting GCOD	Red = Will Not Meet 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.*



Powering Past Coal Task Force - Master Schedule Detailed



PUC Docket Number and Link	PUC Approved Measure to Replace Generation and Capacity of the Coal Plant	Developer	Project or Task Update	Production Capacity (MW)	Estimated Utility RPS Percent Contribution	Guaranteed Commercial Operations Date
2021-0024 Utility-Scale Projects (Stage 1 and 2)						
<a href="#">2018-0434</a>	Millani I Solar (Stage 1)	Clearway Energy Group LLC, Global Infrastructure Partners	<p><b>Permits - Complete, All Expected to be Closed by 6-30-22</b></p> <p><b>Land Rights - Secured</b></p> <p><b>Procurement and Delivery - Complete</b></p> <p><b>Construction - Complete</b></p> <ul style="list-style-type: none"> <li>Mechanical Completion of the facility occurred 3-14-22.</li> <li>energization of the facility occurred in March and hot commissioning has commenced.</li> <li>energization of substation completed 3-9-22.</li> <li>Generation facility testing began 3-29-22 and completed.</li> <li>Project providing energy to the grid.</li> </ul>	39	1.2	<p>New GCOD 7-31-22</p> <p>Estimated COD 7-31-22</p>
<a href="#">2018-0435</a>	Waiawa Solar (Stage 1)	Clearway Energy Group LLC, Global Infrastructure Partners	<p><b>Engineering/Design - Finalized</b></p> <p><b>Permits and Land Rights - Complete and Secured</b></p> <ul style="list-style-type: none"> <li>Hawaiian Telecom utility poles: Permit caused one week delay since last (June) update. <b>Approved 6-28-22. Permit receipt anticipated 7-27-22 (DPP)</b></li> </ul> <p><b>Procurement and Delivery</b></p> <ul style="list-style-type: none"> <li>PV panels 100% delivered to HNL port; 100% installed.</li> <li>8-31-22: Anticipated delivery for all remaining battery enclosure units. Pushed up from Nov-22.</li> </ul> <p><b>Construction - Ongoing</b></p> <ul style="list-style-type: none"> <li>Site installation, substation foundation and equipment setting, PV inverter placement, underground cable installation, BESS yard underground and foundation work, transmission line work, GenTie construction, aboveground DC cabling is complete.</li> <li>Battery equipment installation dependent on arrival date. BESS ACC/DCC cabinets are set, 74 of 116 Quantum units have been delivered and set. All 11 BESS Inverters were delivered and set. Clearway installing what they can.</li> <li>Jul-22 - Gen-Tie access road is complete.</li> </ul>	36	1.2	<p>New GCOD 9-30-22</p> <p>Estimated COD 2-28-23</p>
<a href="#">2019-0050</a>	West O'ahu Solar (Stage 1)	AES West O'ahu Solar, LLC.	<p><b>Engineering/Design</b></p> <ul style="list-style-type: none"> <li>90% design complete for Generating Facility and Substation.</li> <li>100% review completed for COIF and COIF Transmission Line, Revision and resubmission required due to drawing not meeting design requirements. AES submitted revisions 3-25-22, Hawaiian Electric returned comments 4-18-22.</li> <li>AES provided second revised 100% package 7-8-22.</li> </ul> <p><b>Permits</b></p> <ul style="list-style-type: none"> <li>Building Permit Review applications under review by DPP. Permit delays are expected to delay, construction start and commercial operations. Right (8) permits remaining, all require zoning, fire, electrical, and building branch reviews (DPP). HD and the zoning branch provided comments on 5-17-22. AES sent plan revisions to address comments 6-30-22 and 7-8-22.</li> <li>Third Party Plan Review Certification, issued 7-8-22.</li> <li>Special inspection approvals issued 6-20-22, permits remain open.</li> </ul> <p><b>Land Rights</b></p> <p>Easement for COIF required prior to commercial operations. Estimated filing date with Land Court - summer 2022.</p>	12.5	0.4	<p>New GCOD 1-20-23</p> <p>Estimated COD 3-3-23</p>
<a href="#">2020-0136</a>	Kapolei Energy Storage (KES) (Stage 2)	Plus Power	<p><b>Engineering/Design</b></p> <ul style="list-style-type: none"> <li>90% design complete for Storage Facility, Substation, and COIF complete.</li> </ul> <p><b>Permits</b></p> <ul style="list-style-type: none"> <li>6-30-22: Building permits for BESS expected, submitted 10-15-21. Seeing continuous delay, awaiting electrical code review (DPP)</li> <li>7-5-22: Courtesy inspection approved for BESS.</li> <li>7-29-22: Building permit for Substation expected, Seeing continuous delay, awaiting building and electrical code review. Courtesy application submitted on 7/14.</li> <li>8-10-22: Building permit for GenTie expected, Seeing continuous delay, awaiting zoning, building, and electrical code review. (DPP)</li> </ul> <p><b>Land Rights - Secured</b></p> <ul style="list-style-type: none"> <li>Executed Right of Entry for Kapolei Properties Parcels</li> </ul>	185 (Storage)	0.1	<p>New GCOD 12-30-22</p> <p>Estimated COD 5-29-23</p>
<a href="#">2020-0139</a>	Mountain View Solar (Stage 2)	AES Mountain View Solar, LLC.	<p><b>Engineering/Design</b></p> <ul style="list-style-type: none"> <li>AES completed 60% design for Generation Facility and Substation 60%. AES resubmitted design package for COIF 6-20-22, company currently reviewing.</li> <li>End of Dec-22: Engineering and design expected to conclude.</li> <li>Delay in design deliverables may delay procurement of certain equipment and potential execution of construction contract.</li> <li>Engineering and redesigns have delayed the project a total of nearly 4 months.</li> </ul> <p><b>Overhead Line Approval / Interconnection and Design - Awaiting PUC D&amp;O</b></p> <ul style="list-style-type: none"> <li>AES requested that Hawaiian Electric delay overhead line approval to allow for further community engagement and incorporation of feedback.</li> <li>Hawaiian Electric filed 48kV line extension application with the Commission on 5-19-22 and accompanying greenhouse gas analysis on 6-14-22.</li> <li>6-29-22 Procedural schedule adopted.</li> </ul> <p><b>Permits</b></p> <ul style="list-style-type: none"> <li>4-13-22: HCRIS submitted to SHPD, awaiting HRS 6E Determination. (DLNR-SHPD)</li> <li>6-14-22: CUP-Minor, Zoning Waiver approved.</li> <li>Jul-22: Building and Electrical Permits submitted to DPP. (DPP)</li> <li>Grading permitted submitted for Plan Review in Mar-22. One round of comments received. AES addressing comments. (AES)</li> </ul>	7	0.3	<p>GCOD 5-17-23</p> <p>Estimated COD 9-11-23</p>
<a href="#">2020-0137</a>	Waiawa Phase 2 Solar (Stage 2)	Waiawa Phase 2 Solar, LLC. (AES)	<p><b>Engineering/Design</b></p> <ul style="list-style-type: none"> <li>Identified risks include line extension conflicts with Waiawa Stage 1 project and need for breaker replacement (system work) at Waiawa substation.</li> <li>AES submitted 60% design for generation facility, step-up substation, and COIF. Hawaiian Electric design review pending resubmission of substation structures.</li> <li>Delay in the estimated start of the 90% design stage from mid-July 2022 to early Aug-22.</li> <li>AES requests one round of comments back from DPP on building/electrical permit submittal and certainty on more substation equipment procurement completing 90% design.</li> <li>Delay in submissions is resulting in a 2-month impact to COD.</li> </ul> <p><b>Overhead Line Approval - Awaiting PUC D&amp;O</b></p> <ul style="list-style-type: none"> <li>Hawaiian Electric submitted overhead line approval on 3-24-22.</li> <li>Hawaiian Electric submitted greenhouse gas analysis for the Overhead and Underground lines 5-23-22</li> <li>6-17-22: Hawaiian Electric notified PUC that docket ready for decision making.</li> </ul>	30	1.2	<p>GCOD 10-30-23</p> <p>COD 1-5-24</p>
<a href="#">2018-0431</a>	Ho'ohana Solar 1 (Stage 1)	174 Power Global, (Hawaii Energy Corporation, Forest City Sustainable Resources)	<p><b>Engineering/Design</b></p> <ul style="list-style-type: none"> <li>Project seeing habitual slippage in engineering 60-90% design packages for generation facility, switchyard, step up substation, and company owned interconnection facilities.</li> <li>90% design for generation facility expected by 6-15-22</li> <li>100% design for COIF sent 5-9-22, under Hawaiian Electric review</li> <li>BESS inverter manufacturer will change, working with Hawaiian Electric to submit redesign.</li> <li>Wai'au-Milliani 48kV line relocation project to be completed by Sept-22.</li> </ul> <p><b>Overhead Line Approval / Interconnection and Design</b></p> <ul style="list-style-type: none"> <li>Kahe-Wai'au 138 kV UG/OH relocation was filed with PUC on 6-18-21 (PUC Docket 2021-0086), approved by the Commission 6-27-22.</li> </ul> <p><b>Permits</b></p> <ul style="list-style-type: none"> <li>Sept-22: Substation Building permit, slipped from Aug, Apr, Jan-22, and Nov-21, submitted May-21.</li> <li>Oct-22: Solar/Battery Building Permit, slipped from Jun-22 and Mar-22 (174PG &amp; DPP).</li> <li>Nov-22: Switchyard Building permit, not yet submitted, slipped from Aug-22 and Mar-22 (174PG).</li> <li>COIF will likely be impacted by delays to DPP ministerial permits due to the 3rd party review audit.</li> </ul>	52	1.4	<p>GCOD 8-31-23</p> <p>Estimated COD 3-4-24</p>
Sum Online Before Coal Plant Retirement Based on Current GCOD				39		
Sum All Projects				176.5		

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PUC Docket Number and Link	PUC Approved Measure to Replace Generation and Capacity of the Coal Plant	Developer	Project or Task Update	Production Capacity (MW)	Estimated Utility RPS Percent Contribution	Guaranteed Commercial Operations Date
<b>2019-0323</b> Distributed Energy Resources (DER)						
	Battery Bonus Program		<p>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.</p> <ul style="list-style-type: none"> <li>Work with stakeholders to develop strategy to ensure timely permitting and interconnection is ongoing.</li> <li>7-19-21: Battery Bonus program officially announced by HECO.</li> <li>June TF Update: 1,344 approved applications as of 6-24, represents a committed capacity of 7.33MW, and increase of 148 systems and an increase of 1.13MW, 1.86MW and 336 systems in operation.</li> <li>July TF Update: 1,509 approved applications as of 7-22, represents a committed capacity of 8.08MW, and increase of 165 systems and an increase of 750KW, 2.2MW and 393 in confirmed operation.</li> </ul>	50		June 2023 Program Enrollment Ends
<b>2015-0389</b> Community-Based Renewable Energy (CBRE) - Shared Solar						
<a href="#">2015-0389</a>	Palalial Solar 1 - Phase 1		<p><b>Engineering</b></p> <ul style="list-style-type: none"> <li>90% Engineering/ Design review completed by Hawaiian Electric, Hawaiian Electric provided comments on 6-20-22.</li> </ul> <p><b>Permits</b></p> <ul style="list-style-type: none"> <li>Building Permit anticipated Jan-22, was not received waiting on permits to begin construction. No estimate from seller on when permits will be received.</li> <li>Electrical review of building permits commenced 6-3-22.</li> <li>Estimated 1-2 month delay anticipated due to additional review required for remaining permits from DPP.</li> </ul> <p><b>Procurement</b></p> <ul style="list-style-type: none"> <li>PV Panels - 50% arrived Dec-21.</li> <li>Equipment anticipated to arrive Q1 to Q3-22. Items delayed due to review time for remaining permits.</li> </ul>	3		New GCOD 1-27-23 COD March 2023
<a href="#">2015-0389</a>	KHLS - Phase 1		<p><b>Engineering/Design</b></p> <ul style="list-style-type: none"> <li>30% Design in progress for generation facility, step-up substation, COIF.</li> <li>0% design complete for distribution line, telecon, and remote work.</li> <li>Engineering teams are hired.</li> </ul> <p><b>Permits</b></p> <ul style="list-style-type: none"> <li>All discretionary permits received.</li> <li>Jul-22: Estimated submittal date of building, stockpiling, and grading permits (KHLS). Anticipated to receive Nov-22.</li> </ul>	1.72		GCOD 12-17-22 COD Aug-23
	Phase 2		<ul style="list-style-type: none"> <li>Capacity limit is 105 MW for Oahu. Hawaiian Electric has application capacities of 75 MW Large Projects, 15 MW Small Projects, with one (1) minimum 1 uncapped Project.</li> <li>2-23-22: Hawaiian Electric filed its final CBRE RFPs and Rule 29 tariffs. Shall be automatically approved 15 days after filing date, or by 3-10-22, unless the Commission orders otherwise.</li> <li>3-17-22: Hawaiian Electric officially announced opening of the Request for Proposals for CBRE Projects with Low- and Moderate-income subscribers for Oahu.</li> <li>4-14-22: RFP for Tranche 1 and LMI is open and accepting applications.</li> </ul>	105 capacity limit	TBD	
<b>2007-0323</b> Energy Efficiency - Public Benefits Fund						
	General Energy Efficiency Programs for Demand Side Management		<ul style="list-style-type: none"> <li>Docket includes energy efficiency measures that serve to decrease electricity sales and defer or decrease the need for plant investment.</li> <li>The 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.</li> <li>This measure is administered through a third party, Hawaii Energy.</li> </ul>	Average Total Reduction of 20 to 22 MW per year	N/A – Energy Efficiency	Ongoing
	Hawaii Energy Power Move Program		<ul style="list-style-type: none"> <li>In preparation for the retirement of the AES coal plant on O'ahu in September 2022, Hawaii Energy introduced the Power Move program which consists of incentives for certain measures that reduce load during the utility peak hours of 5:00 to 9:00 p.m., program will result in collective demand savings. Rebate incentives average 20% higher than standard Hawaii Energy custom rebates.</li> <li>May TF Update: 34 projects enrolled with a total of 600-700kW peak demand reduction.</li> <li>June TF Update: 45 projects enrolled with a total of 720 kW peak demand reduction.</li> <li>Program seeks to increase the energy efficiency of eligible commercial customers with exterior lighting, large scale HVAC, transformers, industrial refrigeration, and other large scale equipment operating during the utility peak.</li> </ul>	2-3 MW per year	N/A – Energy Efficiency	Installation by 6-30-23
	Power Move - Commercial Battery Storage Rebate Pilot		<ul style="list-style-type: none"> <li>New to the efficiency portfolio, commercial energy storage projects under Power Move will not only help to shift load during evening peak (5p.m. - 9 p.m.) but also help to help inform future DR readiness and grid flexibility programs in order to meet our clean energy and decarbonization goals.</li> <li>The goal is to offer near-term incentives to boost participation in HECO's DER programs or rate offerings, or support the rollout of emergency demand response initiatives with targeted incentives.</li> <li>This rebate will be available for commercial battery storage installed starting in March 2022 through August 2023.</li> <li>May TF Update: No applications yet, although there are few leads on data centers.</li> <li>June TF Update: Two applications submitted representing 255 kW.</li> </ul>	Reflected in Battery Bonus Count Above - estimated 4 MW March 2022 – August 2023	N/A – Energy Efficiency	Installation by 8-31-23
<b>2018-0163</b> Microgrid Services Tariff*						
			<ul style="list-style-type: none"> <li>PUC issued Decision and Order approving microgrid tariff 5-17-21.</li> <li>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 Hawai'i, with the exception of Kaua'i.</li> <li>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".</li> </ul>	TBD	TBD	
<b>2017-0352</b> O'ahu Grid Services RFP.*						
			<ul style="list-style-type: none"> <li>RFP seeks customer sited grid services through a competitive bid request for proposals (RFP). The RFP seeks proposals that include the delivery of Capacity Reduction Grid Service, but proposals that include fast frequency response or capacity build bundled in their proposal will also be considered.</li> <li>8-3-21 - PUC approved, with modifications, the HECO proposed RFP for 60 MW of grid services on the island of Oahu.</li> </ul>	60	TBD	COD 9-1-22 for Proposals
<b>2014-0135</b> Green Infrastructure Loan Program: Green Energy Market Securitization (GEMS) *						
			<ul style="list-style-type: none"> <li>Leverages public-private capital to deploy clean energy infrastructure that will contribute towards Hawaii's pursuit of its statutory 100% clean energy goals by 2045 while helping ratepayers lower their energy costs.</li> <li>8-13-21: PUC establishes procedural schedule to review the Green Infrastructure Loan Program</li> <li>Hawaii Green Infrastructure Authority agrees to include the number and value of loans made to finance purchase options and the number and value of loans to finance EVs and EV charging stations and principal repaid into the State Revolving Fund in the quarterly report.</li> </ul>	TBD	TBD	
<b>2007-0341</b> Demand Side Management (DSM)						
			<ul style="list-style-type: none"> <li>Programs that incentivize residential, commercial, and industrial energy savings through rate schedules. DSM programs generally consist of the planning, implementing, and monitoring activities of electric utilities which are designed to encourage consumers to modify their level and pattern of electricity usage. Docket includes tariffs and prices to encourage lower consumption</li> </ul>	TBD	TBD	