

Hawaii State Energy Office

Transforming Hawaii's clean energy future

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Hawaii Clean Energy Initiative (HCEI)

- ◆ What is HCEI?
- ◆ Our RPS and EEPS mandates are statutorily prescribed
- ◆ 70% clean energy by 2030
 - 30% from efficiency measure (“Energy Efficiency Portfolio Standards, EEPS”)
 - 40% from locally generated renewable sources (“Renewable Energy Portfolio Standards, RPS”)
 - ◆ 15% by 2015
 - ◆ 25% by 2020
 - ◆ 40% by 2030

Legislative & Regulatory Accomplishments

- HEI/State of Hawaii Energy Agreement
- RE Portfolio Standards Docket
- KIUC Tariff Docket
- Act: Allows solar on Ag lands

2008

2009

- RE Infrastructure Program Docket
- Maui County PV/Wind Permit Guide, DSA 18.0
- New home solar hot water heating mandate (HRS 196-6.5)
- Act: RPS revised to 25% by 2020, 30% by 2030; created EEPS (4300 GWh reduction by 2030); allowed EPC contracting
- Act: subdivision exemptions for RE

2010

- Comp. Bidding Framework Docket
- Act: Created \$1.05 “Barrel Tax” for HCEI and food
- Act: Gas Co to submit RPS reports

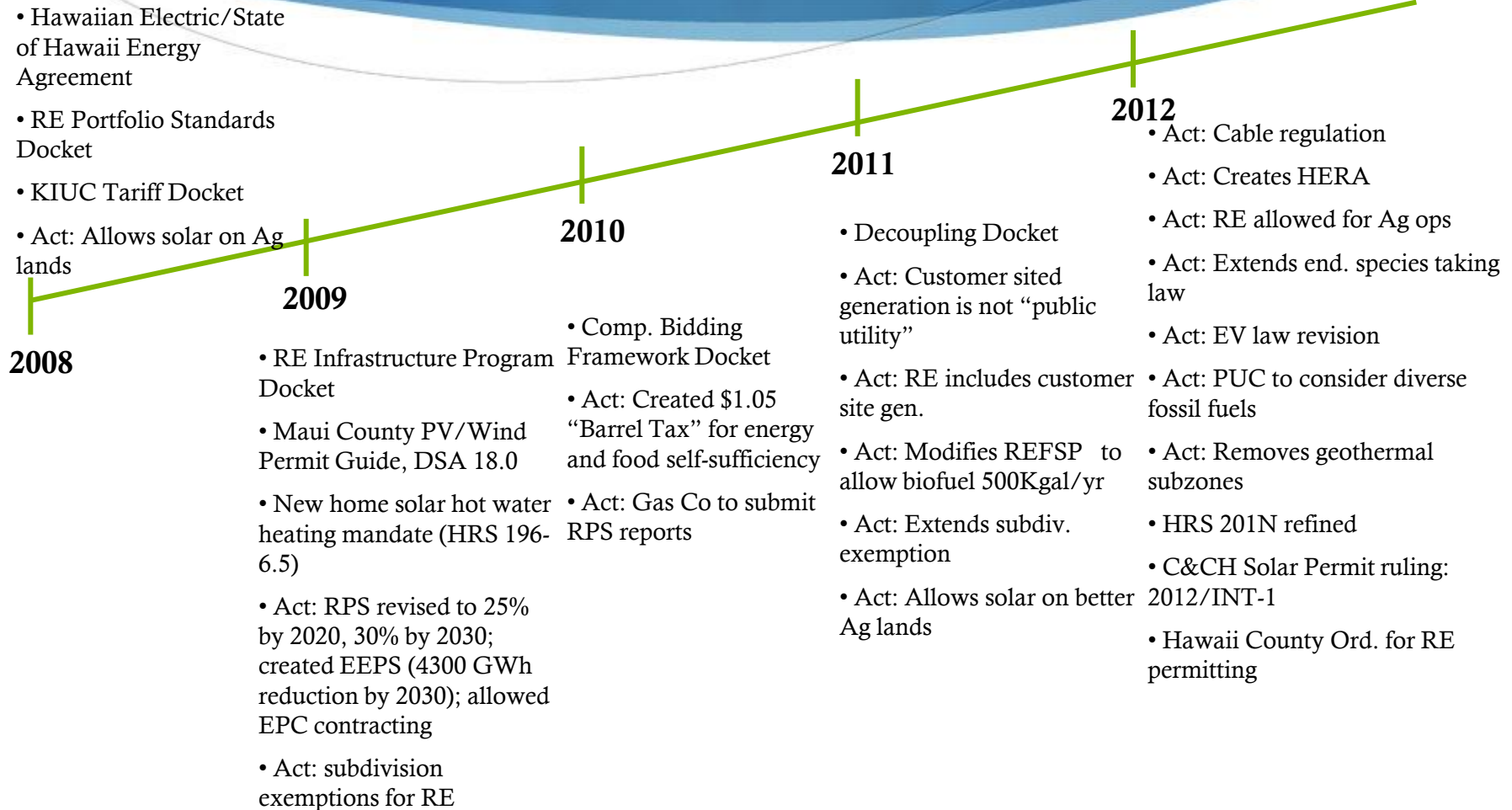
2011

- Decoupling Docket
- Act: Customer sited generation is not “public utility”
- Act: RE includes customer site gen.
- Act: Modifies REFSP to allow biofuel 500Kgal/yr
- Act: Extends subdiv. exemption
- Act: Allows solar on better Ag lands

2012

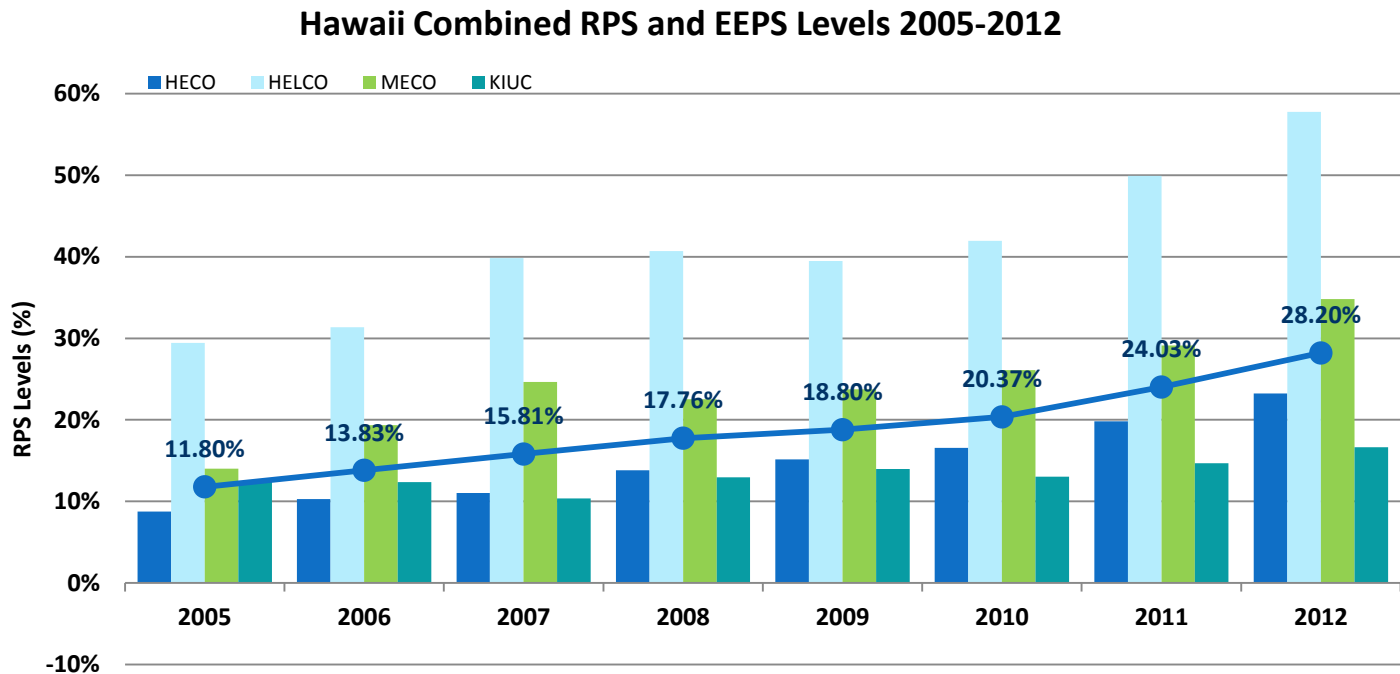
- Bill: Cable regulation
- Bill: Creates HERA
- Bill: RE allowed for Ag ops
- Bill: Extends end. species taking law
- Act: EV law revision
- Act: PUC to consider diverse fossil fuels
- Act: Removes geothermal subzones
- HRS 201N refined
- C&CH Solar Permit ruling: 2012/INT-1
- Hawaii County Ord. for RE permitting

Legislative & Regulatory Accomplishments



Status of RPS and EEPS – on target for 2015!

In 2012, Hawaii achieved 14.5% EEPS and 13.7% RPS



Challenges to RE deployment

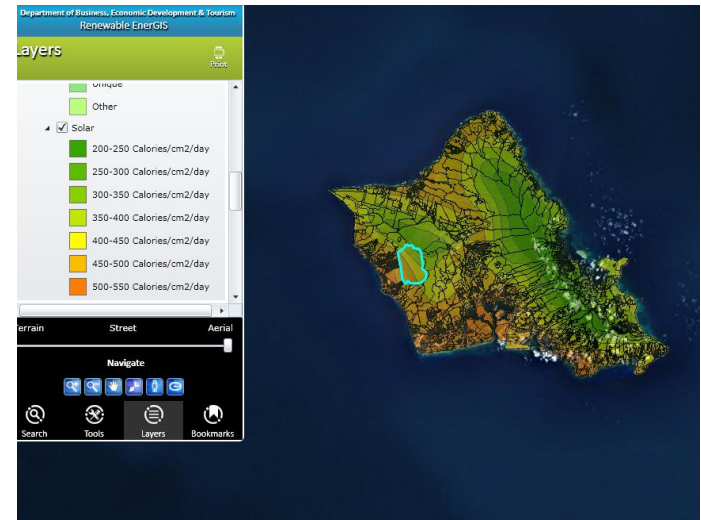
- ◆ Interconnection, especially in already high renewable energy (RE) penetration circuits
- ◆ Understanding of permitting and siting requirements, costs and timelines
- ◆ Access to capital
- ◆ Excess energy curtailments of RE
- ◆ Balancing grid reliability and safety with increased RE penetration

Interconnection efforts supported by HSEO

- ◆ HECO's ProActive Approach
- ◆ Establishment of a standard interconnection agreement
- ◆ Accelerated analysis and approval of measures that can be taken to eliminate or substantially reduce excess energy curtailments
- ◆ Formal establishment of an electricity reliability regulatory oversight program and administrator (HERA)

Hawaii permitting & siting “self-help” tools

- 🟢 Hawaii Permitting Wizard
- 🟢 Renewable EnerGIS
- 🟢 Permitting Guide
- 🟢 DOH ePermitting



These tools and other resources can be accessed through:

energy.hawaii.gov → Developer Investor Center

Hawaii Clean Energy PEIS

- ◆ Led by US Department of Energy. HSEO is a cooperating agency, amongst others
- ◆ Will analyze, at a programmatic level, the prospective environmental impacts of clean energy activities and technologies
- ◆ Reference document when preparing project-specific environmental review documents
- ◆ Guidance the DOE can use in making decisions about future DOE funding and other actions to support Hawaii in achieving its clean energy goals

Innovation

- ◆ Green Energy Market Securitization (GEMS)
 - ◆ Groundbreaking “green infrastructure” on-bill financing
 - ◆ Designed to make clean energy improvements affordable and accessible to Hawaii’s underserved markets



Oahu-Maui Grid Tie

Why it makes sense

- ◆ Reduced electricity rates of $\sim 0.4\text{--}0.6\text{¢/kwh}$
- ◆ Economic benefits to ratepayers
- ◆ Reduced RE curtailments
- ◆ Increased grid reliability and RE penetration
- ◆ Lower GHG emissions and environmental compliance costs
- ◆ **Key enabler of achieving RPS objectives in the most economical and equitable fashion**



Image Source: NextEra Energy

Mahalo!



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