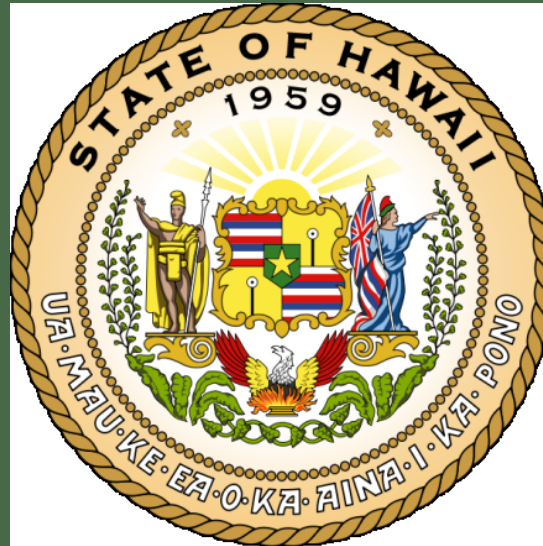


Hawaii Public Utilities Commission



Innovative Financing Solutions to Hawaii's Clean Energy Challenges

May 10, 2013

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Presentation Overview

On-Bill Financing (OBF) Basics

- Program Overview
- OBF Decision and Working Groups
- OBF Timeline

Green Energy Market Securitization (GEMS)

- Program Overview
- Structure and Responsibilities
- Timeline

Innovative Solutions to Hawaii's Clean Energy Challenges

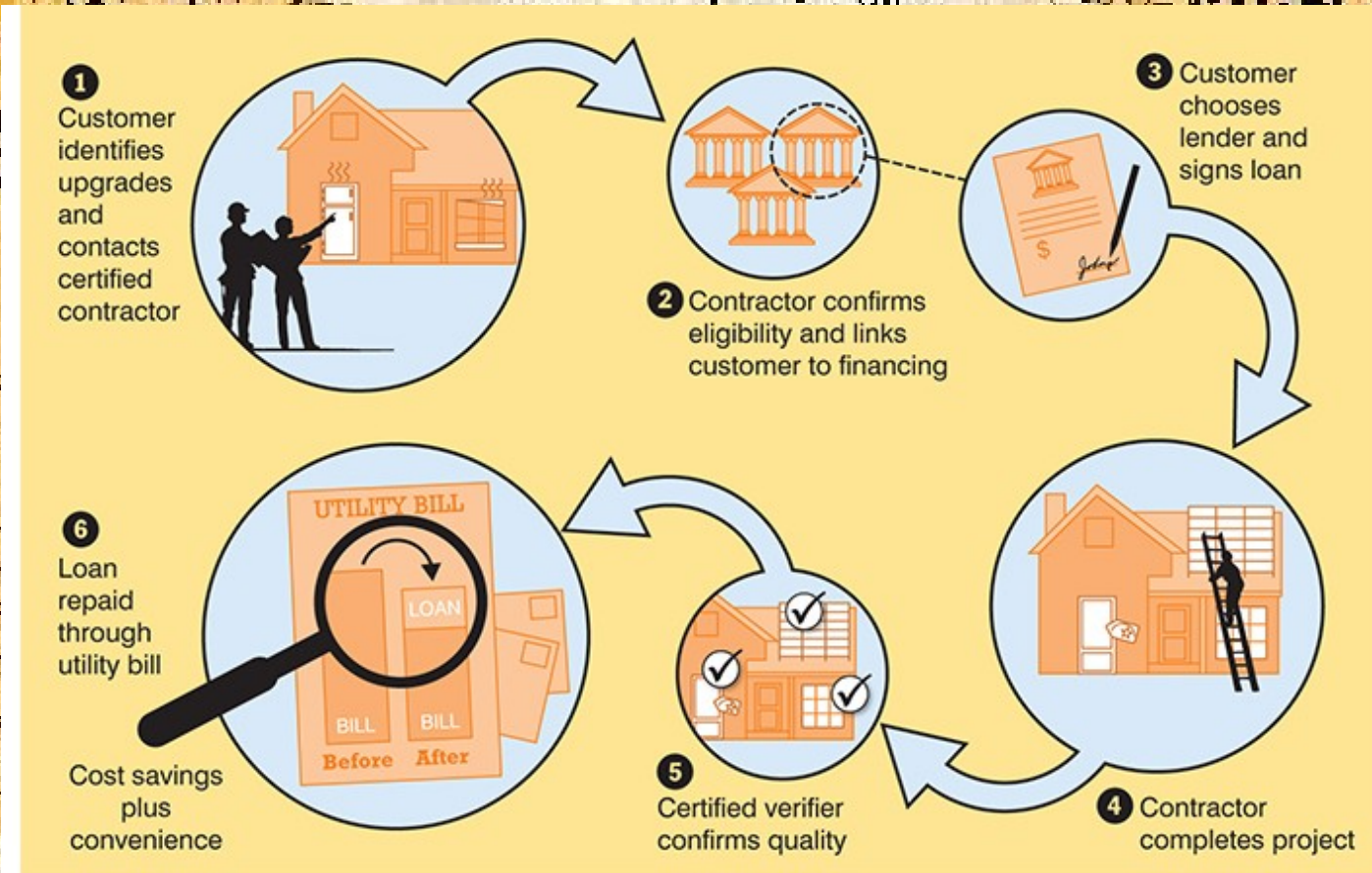
Financing: removing barriers to access low-cost capital

- In order to achieve HCEI, over ~\$15 billion in investment capital would be required
 - Minimizing the cost of capital is critical to **managing cost impacts to ratepayers**
- Clean energy infrastructure requires **significant upfront capital investments**
- Many of today's clean energy financing products only serve those who can afford the large upfront costs or have the financial ability to access credit, creating an underserved market



**On-bill Financing & Green Energy Market
Securitization (GEMS)**

On-Bill Financing Lowers Barriers to Clean Energy



Source: Environmental Defense Fund

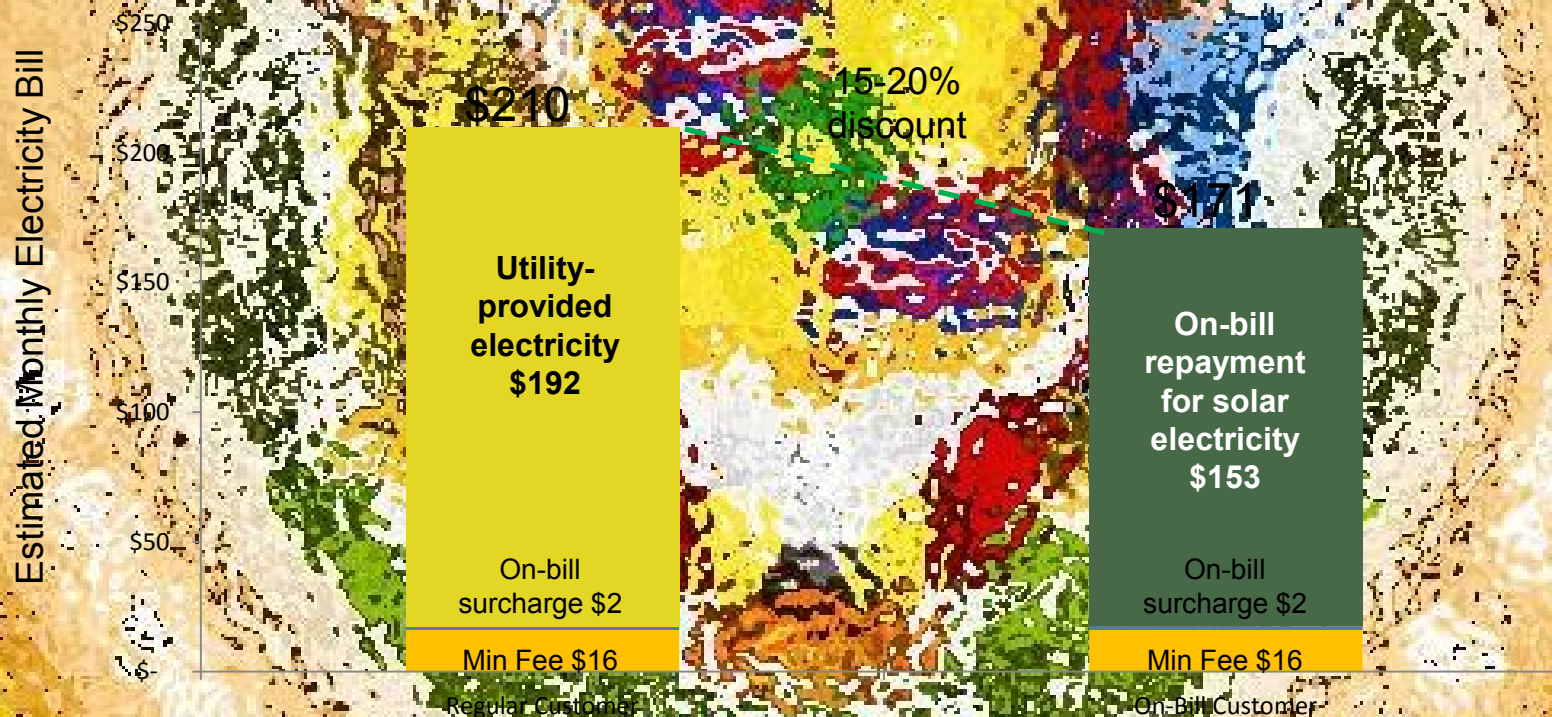
Financing installation lowers upfront costs to customers.

Linking repayment to utility account (meter) lowers risk and opens market to renters

Customer can receive immediate discount on electricity bill with no upfront cost

- Ability to install solar with no money down
- Repayment for solar installation completed over time through utility bill

Illustrative: GEMS PV Financing through Lessor



On-Bill Financing Program

July 8, 2011 - HB1520, HD2, CD1 signed into law as Act 204

Act 204 directs PUC to investigate an on-bill financing program that:

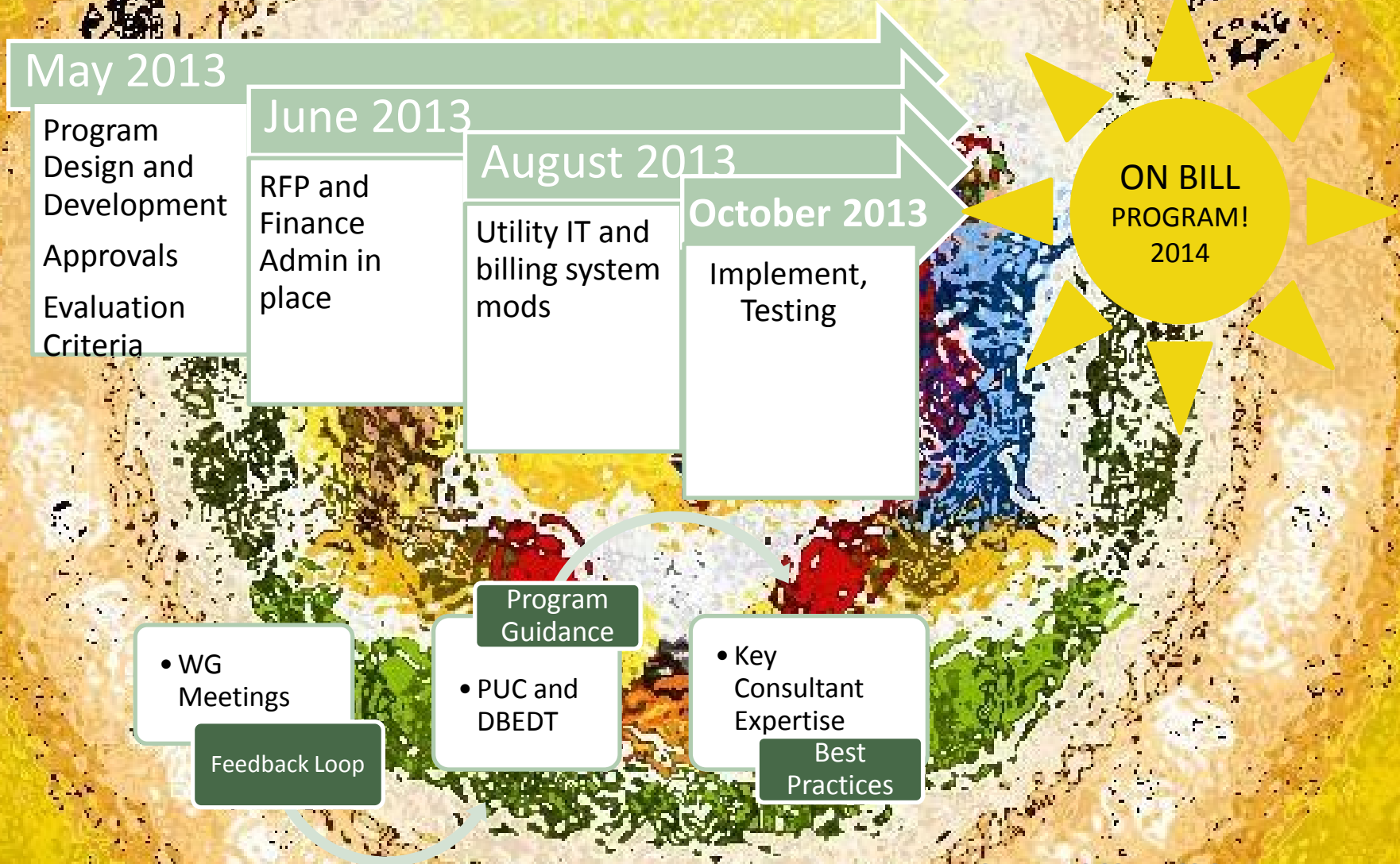
- would allow an electric utility customer to purchase or otherwise acquire a renewable energy system or energy efficiency devices through an assessment on the customer's electric bill
- authorizes the PUC to implement the program by decision and order or by rules if the on-bill program is found to be viable

Decision & Order No. 30974

February 1, 2013

- Found that an OBFP for Hawaii can be viable
- Established Working Group to help develop QBF program
- Specified parameters of program components necessary for a viable program
 - Eligibility – residential and small business (initially – scale if successful)
 - Measures – PV and permanently installed energy efficiency measures
 - Bill Neutrality – Based on measure life and electricity rate at time of enrollment
 - Tariff/Service based, rather than loan
 - Transferable – payment obligation stays with meter, not customer
 - Non-Payment – procedures same as utility, including shut-off

Proposed Timeline



Green Energy Market Securitization (GEMS) Program

- ▶ Enabling legislation passed (SB 1087 “Green Infrastructure” bill)
- ▶ First of its kind model to bring together a traditionally industrial financing solution to directly serve and benefit consumers, creating a new asset class in the energy world

GEMS Bond (RRB-structured bond)

- ▶ Bond issuance structured based on traditional utility securitization model
- ▶ Bonds to be secured and repaid from utility customer surcharge
- ▶ Over \$40 billion of bonds have been issued under this structure since 1997

On-bill Financing

- ▶ Low-cost pool of bond proceeds to fund an on-bill financing program to enable consumers to invest in clean energy technology infrastructure
- ▶ Repayment for consumer energy saving installations done via customers' utility bill

GEMS program overview

Initial Focus and Objective

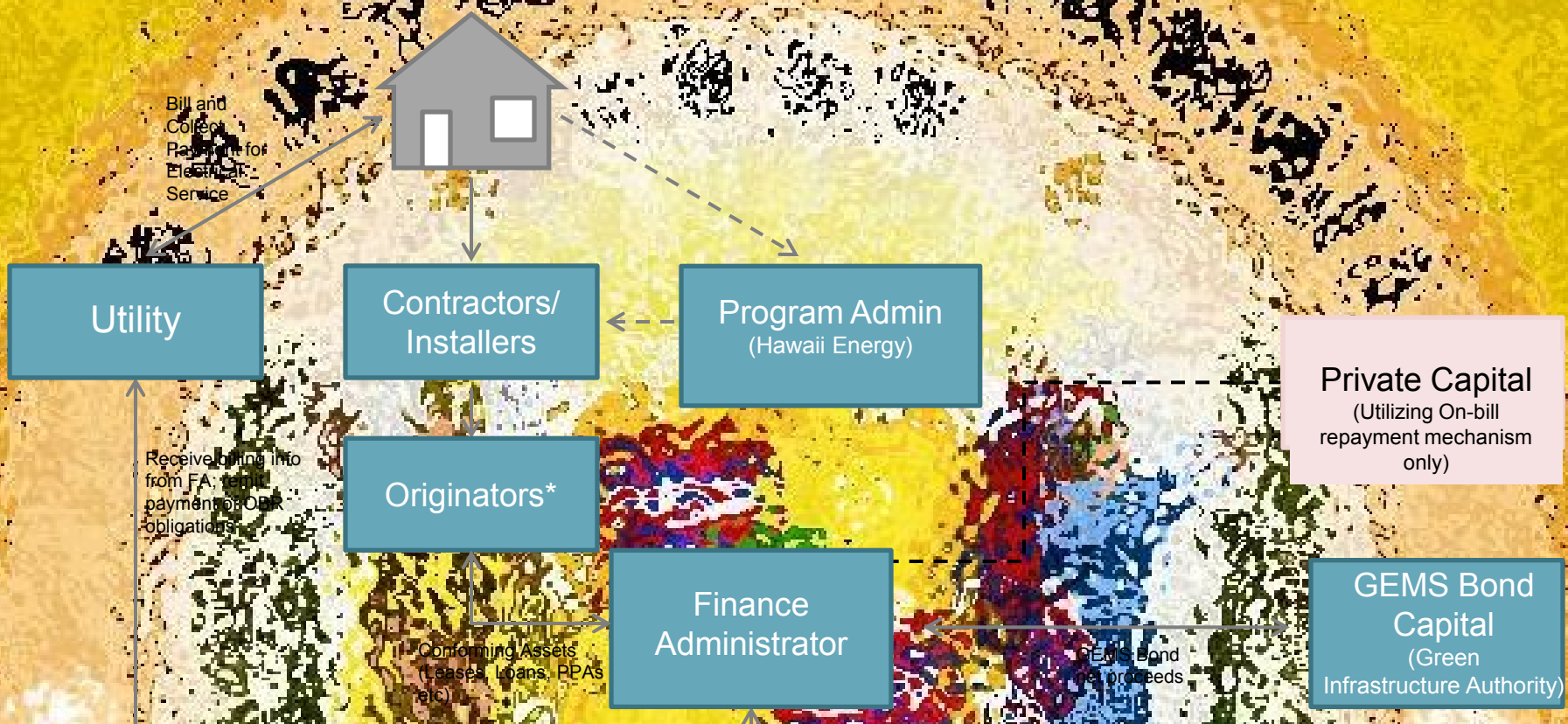
- ▶ **Increase solar penetration in underserved markets**, particularly in areas such as low income segments, rental markets, and non-profits where low-cost credit is not accessible or affordable

Program Description

- ▶ Bond issuance to obtain pool of low cost private capital through securitization structure and will result in **no additional cost to the State**
- ▶ **Low-cost funds for on-bill program** can dramatically increase clean energy and energy efficiency installations and lower customer bills

Future Opportunities

- ▶ Program can be **expanded to serve other markets and types of clean energy and energy efficiency deployment, driving down costs and making it affordable to all**
- ▶ **Create self-sufficient program long-term.**



- Contractors**
- Primary interface with customers
 - Install clean energy projects
 - Market program
- Program Administrator**
- Manage and certify contractors
 - Verify projects
 - Data processing and reporting
 - Support customer interface and communications with other parties

- Finance Administrator**
- Coordinate capital sources
 - Coordinate and facilitate of origination underwriting
 - Service payments and collections
 - Calculate customer repayments
 - Data processing and reporting

- Utility**
- Coordinate with Finance Administrator to establish on-bill interface protocols
 - Set up customers in billing system
 - Receive monthly billing information from Administrator
 - Perform bill collections

GEMS Program Processes

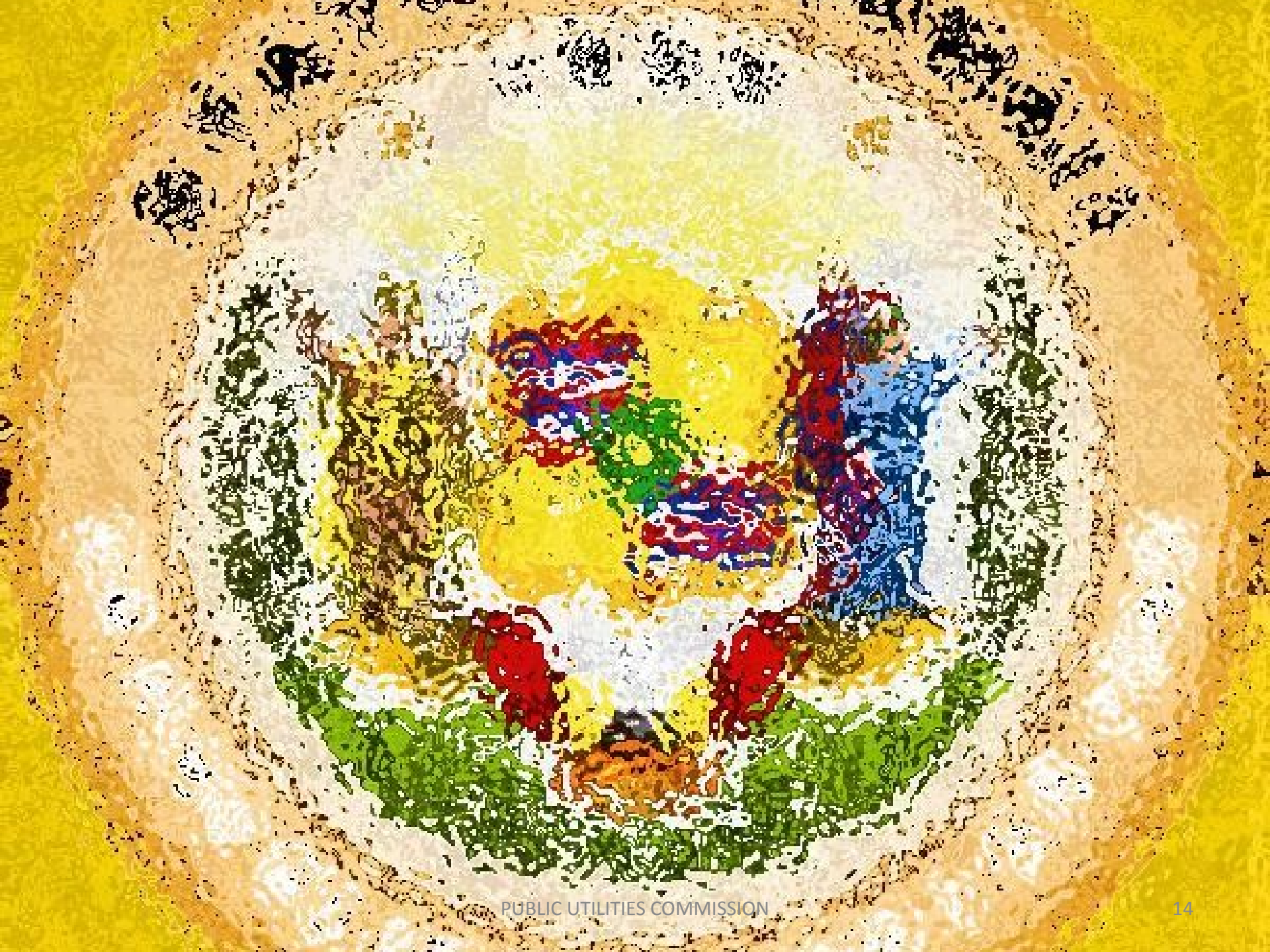
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Legislation		Bill passage		Gov signature										
Capital					Financing Order application and approval									
Program					Program Order application and approval									

- **“Green Infrastructure bill” enactment**
 - **Bill passage:** SB 1087 CD1 passed the Senate and House on April 30, 2013
 - **Governor signature:** bill enactment
 - Bill has been enrolled to the Governor as of May 7, 2013
 - Has until July 9, 2013 to sign, veto, or let a bill become law without his signature
- **Financing Order: DBEDT application, PUC approval required**
 - Financing Order application for regulatory approval for use of funds to secure GEMS bonds
 - 90-day statutory timeline
- **Program Order approval: Authority application, PUC approval required**
 - Program Order application for regulatory approval for use of GEMS bonds proceeds



Mahalo!

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Program Participants

1. Initially residential and small business
2. Focus on previously underserved: those who would not otherwise participate in any energy efficiency saving program or purchase a renewable energy device, or cannot avail themselves of other, more traditional means of financing such devices



Eligible Measures and Ownership

1. All permanently installed measures (solar PV, solar thermal, energy improvements) as referenced in the HEE technical reference manual (2011)
2. Encourage energy efficiency (reduced consumption) before generation
3. Ownership of equipment is tied to the financing program and the supplier of capital
4. PUC instructs working group that program development recommendations offered should be structured to ensure that owners/taxed entities are able to pass through a substantial portion of savings to customers and that tax incentives available for eligible measures are maximized

Neutrality, Transferability, Ownership

1. Perceived savings; specific percentage of savings necessary for the program design to be determined by Working Group
2. Consultant Recommendation: the calculation of bill neutrality is based on the reasonable life of the equipment
3. Service and tariff-based program, rather than a loan-based program
4. Transferable installation benefits and payments



Collections Procedures & Shut-off



1. Procedures for non-payment should follow commission-approved procedures for electric utility tariff non-payment, including shut-off
2. An electric utility already has a recovery component included in its rate base for uncollectable accounts; additional risk to utility should be immaterial
3. Pari passu distribution of partial payments

Program Administration & Marketing

1. Program administrator serves as the point of contact for the customer
2. Hawaii Energy (currently, Public Benefits Administrator) is the PUC's preferred choice to act as the Program Administrator
3. Program should be contractor-centric with system to certify and manage contractors
4. Program administrator to work closely with financing program administrator and utilities
5. Marketing efforts to target underserved markets

Finance Program Structure

1. Program success is predicated on obtaining low cost capital
2. Competitive Procurement process to place Financing Program Administrator
3. Financing Program Administrator able to obtain and distribute various sources of capital
4. Working group to offer recommendations on RFP design, and suggestions in the development and design of the financing aspects of the program

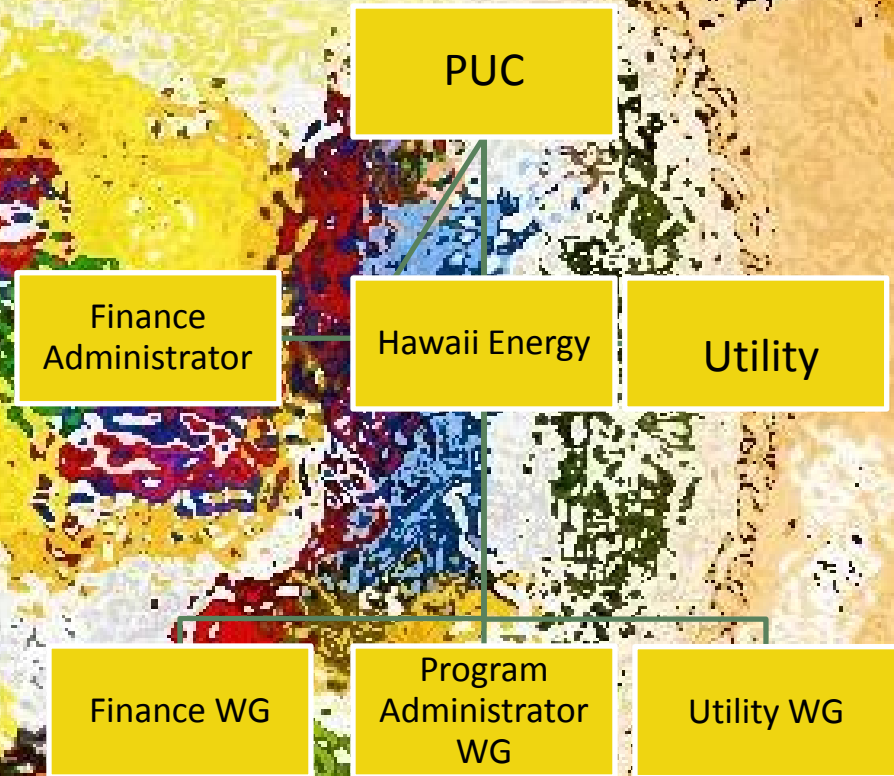
Scalability

1. Proof of concept stage to gain widespread acceptance
2. Working group to focus on development of a scalable program that starts with all of the program essential components and capable of expansion should program prove to be successful and cost-effective
3. Possible additional savings obtained from economies of scale



Working Groups

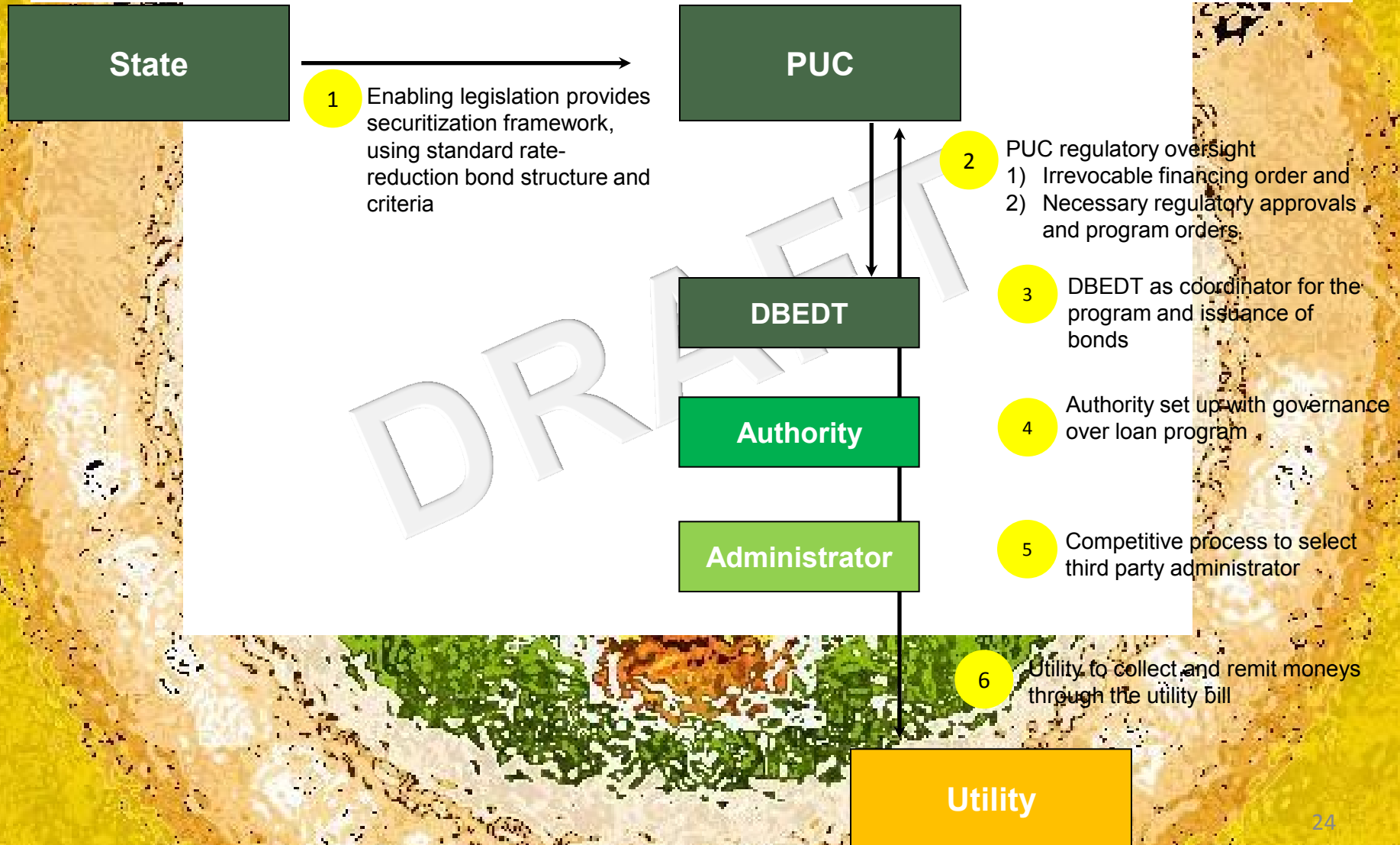
1. Comprises all parties and participant in the OBFP investigation docket
2. Works to identify and address potential issues in the creation and administration of an OBFP, make recommendations for program design, operations, evaluation, and integration into the Energy Efficiency Portfolio Standards goals



Utility Integration

1. Identification of billing/ CIS needs
 - Payment Processing (pari passu – SAP limitations)
 - Interfacing with Program Administrator / Program Finance
 - Reporting
2. Systemization of utility data transfer, system controls, data releases
 - Transfer between occupants
 - Loan details maintained by Finance Administrator
3. Repayment
 - Impact on utility uncollectible, including details regarding late payments, interest, partial payments
 - Vacancy responsibility
4. Utility cost recovery
 - CIS modification
 - CIS maintenance
 - Customer Service – training and ongoing
 - Data transfer/ administration
 - Uncollectibles

Initial framework for GEMS program



Structure and Responsibilities

Bond investors

Receive Bond proceeds

Make P & I payments from Hawaii green infrastructure bond fund

Contribute net bond proceeds via Hawaii green infrastructure special fund

DBEDT

Authority⁽³⁾

Authority to contract for administration of program, as designed in the Program Order

Administrator(s)

- Procure Underwriter, Bond Counsel, Financial Advisor (as needed)
- Apply to PUC for **Financing Order approval**⁽¹⁾
- **Issue Green Infrastructure Bonds**⁽²⁾
- Pay **principal and interest** on Green Infrastructure Bonds
- **Reporting** (including legislative report)

- Establish **loan program guidelines**, including underwriting
- Apply to PUC for **Program Order approval**⁽⁴⁾
- **Make loans**, hold and invest moneys in the special fund
- **Contract for administrator(s)**⁽⁵⁾
- **Hire and contract** as needed for implementation of program
- Submit **Annual Plan** to PUC
- **Reporting** (including legislative report)

Contractor management / QA	Customer interface / communication	Financial processing & implementation	Payment management
Project verification	Data collection and reporting	Credit-related activities	Program reporting

(1) Per SB 1087, CD1, 269-B and 269-C: Financing Order

(2) Per SB 1087, CD1, Section 6: Bond Authorization

(3) Per SB 1087, CD1: 196-D: Functions, powers, and duties of the Authority

(4) Per SB 1087, CD1, 269-J and 269-K: Program Order Application and Issuance of approval

(5) Per SB 1087, CD1, 196-D(a)(5): Enter into contracts for the administration of the loan program, without the necessity of complying with chapter 103D

Financing Order application

- **DEEDT** to prepare and submit **Financing Order application** to the PUC
 - With **B&F**, Underwriter and Bond counsel
 - Regulatory approval process to issue green infrastructure bonds
- 90 day statutory review time
 - Need to align Financing Order approval timeline with Program Order approval estimated timeline
 - Would not issue bonds without plan for approval of deployment of capital (through Program Order)

Financing Order: summary of components⁽¹⁾

- 1) Maximum amount of green infrastructure bonds requested to be issued under the financing order
- 2) Term of the green infrastructure bonds
- 3) A description of the financing costs which will be recoverable through green infrastructure fees
- 4) A description of the methodology to be applied by the PUC for calculating the green infrastructure fee, including the allocation of financing costs among electric utilities and customer classes
- 5) A description of the formulaic adjustment mechanism to be used by the PUC to adjust the green infrastructure fee
- 6) A requirement that the electric utilities serve as agents to collect the green infrastructure fees and transfer those surcharges to the trustee or other financing party
- 7) The procedures to be followed and distribution of amounts by the electric utilities in the event of non-payment or partial payment of the green infrastructure fees and billed amounts
- 8) Terms satisfactory to the PUC to assure that the green infrastructure fee shall be nonbypassable and will be paid by all existing and future customers of an electric utility

(1) See SB 1087, CD1 269-C(c)

Program Order application

- **Authority** to prepare and submit **Program Order application** to PUC
 - Regulatory approval process for use of funds authorized to be issued under Financing Order
- No statutory review time
 - DBEDT may request consolidation of proceedings with Financing Order

Program Order: summary of components⁽¹⁾

- 1) Description of each project, program, financing agreement, or other arrangement for which the authority would deploy funds from special fund, including
 - a) The clean energy technology, demand response technology, and energy use reduction and demand side management infrastructure, programs, and services to be financed
 - b) A description of the parties intended to benefit
 - c) A description of the loan programs or other arrangements designed
 - d) Any and all funding or credit sources identified, pledged, dedicated, or otherwise provided to supplement the Hawaii green infrastructure special fund amounts
- 2) Minimum underwriting criteria
- 3) Description of the repayment processes, mechanisms, and applicable calculations
- 4) Explanation of the anticipated impacts and benefits to electric utility ratepayers