Staff Report Item 4

TO: East Bay Community Energy Executive Committee Members

FROM: Nick Chaset, Chief Executive Officer

SUBJECT: **Local Development Business Plan Update**

DATE: June 29, 2018

Recommendation

Receive an in-depth update from Chris Sentieri, LDBP project manager, on the draft Local Development Business Plan. Full presentation included as an attachment.

Attachment:

A. Local Development Business Plan presentation

East Bay Community Energy
Local Development Business Plan

DRAFT LDBP Executive Committee Review and Discussion

June 29th, 2018

LDBP Project Team:

ALH Urban & Regional Economics

blue strike environmental

Clean Coalition — Making Clean Local Energy Accessible Now

eco·shift CONSULTING

OPTONY

Special Advisors:
Betony Jones & **Gary Calderon**

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EAST BAY COMMUNITY ENERGY

"As the Community Choice process in Alameda County has evolved over time, many local officials and stakeholders have expressed a desire for EBCE to act upon a strong commitment to the development of local renewable energy resources as the way to achieve a host of program goals related to greenhouse gas reductions, business development, job creation and ratepayer savings and local wealth generation. This kind of development requires a transition over time from simply procuring renewable electricity on the wholesale market to creating an optimized system of local distributed energy resources that play a larger and larger role in addressing the energy needs of our communities. But this transition does not happen by accident; the fundamental challenge is to set out a roadmap for making it happen within an aggressive yet achievable timeframe." —from the Local Development Business Plan RFP

EBCE Goals and Priorities

- EBCE's relationship with its customers is the highest priority
- Maintaining stable and competitive rates is essential
- Prioritizing the development and utilization of local clean energy resources in ways that maximize local benefits is highly important to the EBCE community
- Actively supporting the development and maintenance of a highly skilled local workforces is key to EBCE's stability & success
- The Local Development Business Plan is an important tool that will support EBCE's ongoing efforts to deliver on each of these core goals and priorities

Overarching Principles of the LDBP

- Develop a high-level roadmap and framework for accelerating local DER deployment and maximizing community benefits
- Offering innovative program designs can overcome market failures & incentivize meaningful community & organizational benefits
- Development of local, clean, dispatchable, and distributed energy resources supports EBCE's core values and goals
- EBCE can support a vibrant local economy and workforce, and protect its most vulnerable customers through targeted local energy programming and investments
- A diversified portfolio of local programs coupled with retail rate savings can deliver greater benefit than rate savings alone

Central LDBP Concepts & Mechanisms

- Effective delivery of LDBP Programs depends on a robust, integrated data platform & advanced data management
- A phased-in approach is necessary, & supports successful implementation of the LDBP
- Community Benefit Adders (CBA's) can be an effective tool to ensure & enhance beneficial local outcomes
- Market responsive pricing (MRP) can maximize impacts, constrain costs, & minimize risks associated w/LDBP implementation
- Contractual relationships with EBCE customers & stakeholders can create lasting, mutually beneficial partnerships

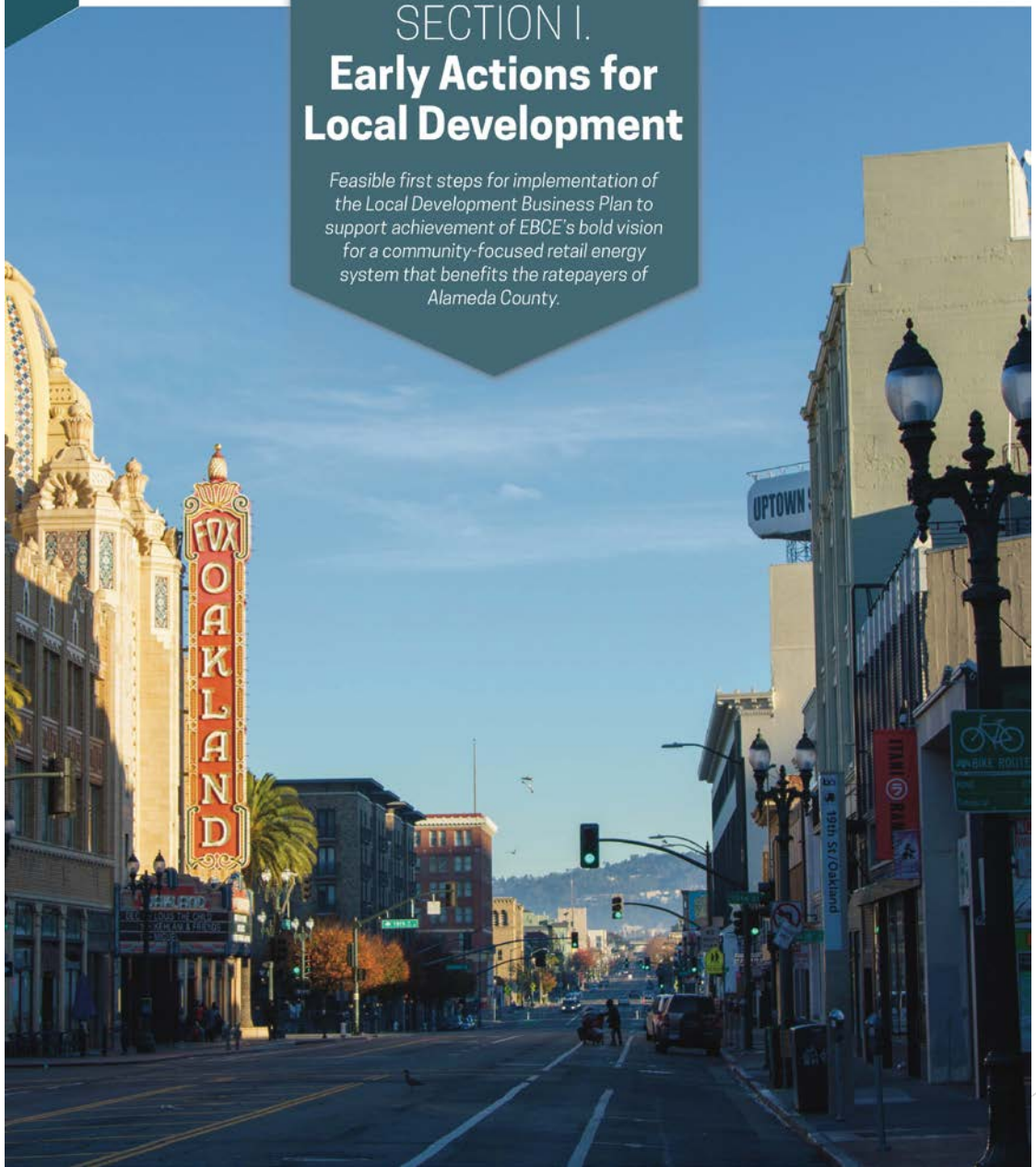
Brief Overview of the Plan

- **The LDBP is designed to be both progressive and pragmatic, providing a flexible framework and innovative tools for accelerating beneficial local clean energy development**
- **The plan recommends a phased-in approach, in 3 stages spanning the first 5 years of EBCE operations, and is intended to be an iterative and inclusive process that engages the community:**

1. **Stage 1 Launch (2018-2020): Implement a broad suite of early actions, designed to jump start local development through a combination of cost-effective programs and innovative pilots**
2. **Stage 2 Expansion (2021-2022): Conduct mid-term assessment of outcomes to provide basis for scaling up local programs and determining investment allocations, expand pilots into programs**
3. **Stage 3 LDBP Update (2023): Comprehensive assessment and public reporting, and 1st major update to the LDBP to reset for next 5-yr cycle**

SECTION I.
Early Actions for Local Development

Feasible first steps for implementation of the Local Development Business Plan to support achievement of EBCE's bold vision for a community-focused retail energy system that benefits the ratepayers of Alameda County.

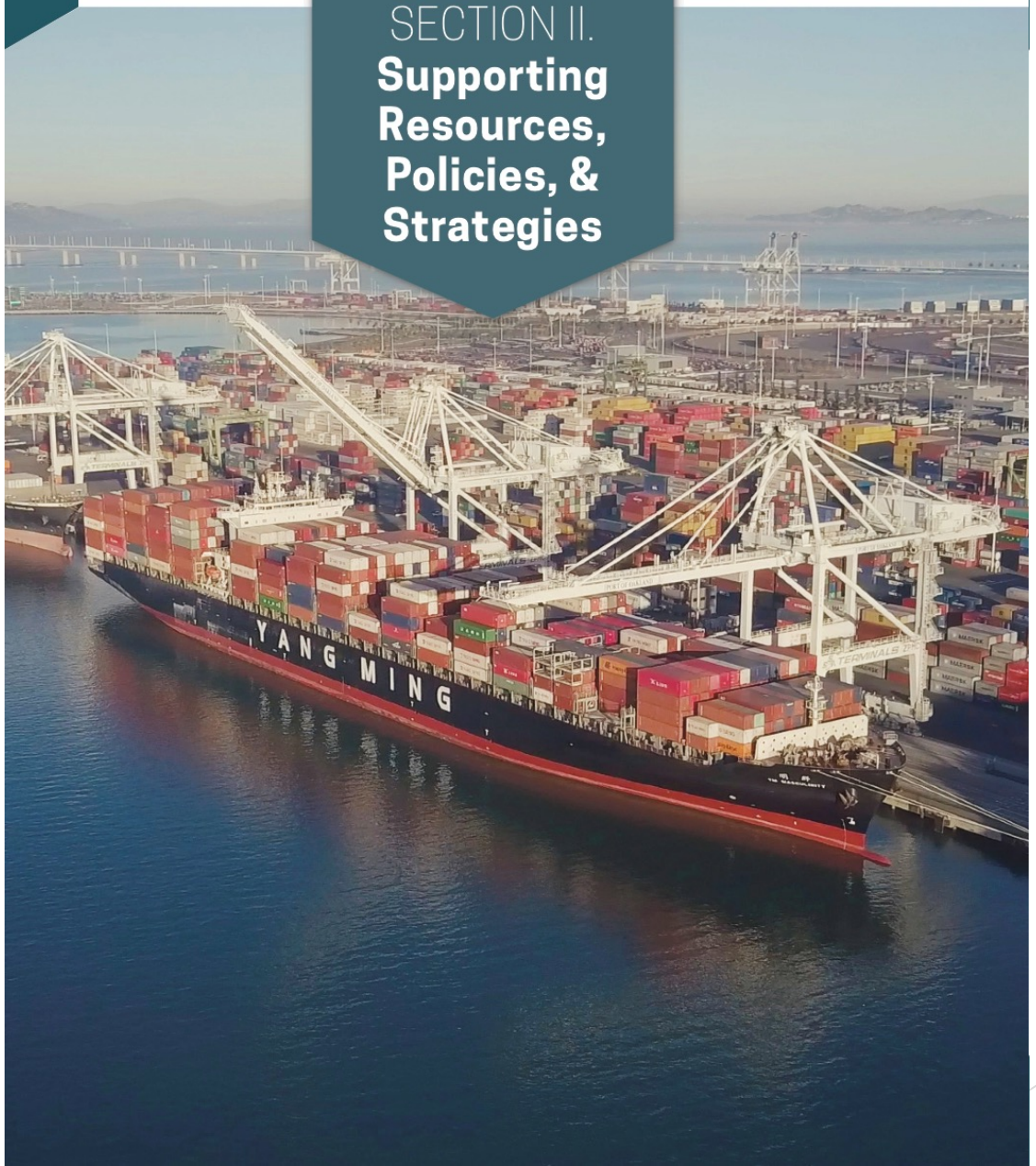


Overview: Stage 1 LDBP Programs & Pilots

Early Actions for Local Development	Stage 1 Target
1. Demand Response	**Implement Pilot**
2. Energy Efficiency	**Build Capacity/Synergy**
3. Building Electrification	**Implement Pilot**
4.Transportation Electrification	**Implement Pilot**
5. Collaborative Procurement	**30-60 MW**
Municipal Feed-in Tariff (FIT)	*10-15 MW*
Community Shared Solar (FIT)	*500 kW-4 MW*
Community Net Energy Metering	*1-5 MW*
Direct RE Contracting for Large Customers	*Implement Pilot*
Utility-scale RE and Storage	*20-40 MW*
6. Enhanced Net Energy Metering	***50-60 MW****
7. Community Innovation Fund	**Commence Grant Solicitations**

*Note- This is based on recent historical NEM installations in Alameda County, because the impact of the EBCE Enhanced NEM Community Benefit Adders is unknown. The Mid-term LDBP Assessment will provide the data necessary to validate and project the impact of the Enhanced NEM program elements (i.e., Community Benefit Adders)

SECTION II.
Supporting Resources, Policies, & Strategies



SECTION III.

Ongoing Analysis, Implementation, & Refinement

By focusing on opportunities for local clean energy development, the LDBP can help EBCE maximize beneficial outcomes for the communities of Alameda County.

Stage 1: LDBP Launch

- Organizational Development:
  - *Integrated Data Platform*
  - *Internal Capacity Building*
  - *Develop a High-road Workforce Policy*
- Enhanced Net Energy Metering (NEM)
- Collaborative Procurement Program
  - *Implement Round 1 of "MuniFIT"*
  - *Implement Community Shared Solar Pilot*
  - *Implement Community NEM Pilot*
  - *Direct RE Contracting Pilot (for large accounts)*
  - *Wholesale RPS Procurement Integration*
    - *Oakland Clean Energy Initiative (OCEI)*
- Implement Demand Response Pilot
- Develop Fuel Switching Program
- Implement Transportation Electrification Pilot
- Promote & Enhance Existing Energy Efficiency
- Community Investment Fund
  - *Energy Innovation Grants*
  - *Government Innovation Grants*
  - *Community Innovation Grants*

Stage 2: LDBP Expansion

- Continue Implementation of Stage 1 Programs
  - *Extend Pilots to Full-fledged Programs*
  - *Increase EBCE Investment in LDBP Programs*
  - *Ongoing Capacity Building (staffing, data, etc.)*
- Mid-term Assessment of LDBP Program Performance & Outcomes
  - *Use LDBP Tools/Frameworks (i.e., IMPLAN)*
  - *Clear and Transparent Public Reporting*
- Ongoing Facilitated Stakeholder Engagement
  - *Led by EBCE Staff & CAC Working Group*
    - *EBCE Board/Executive Committee Oversight*
  - *Use LDBP Scenario Analysis Tools*
  - *Inform Stage 2 LDBP Investment Allocations*
- ***Evaluate Beneficial Rate Design Options***
- ***Develop & Adopt Strategic Plan for EBCE DER Aggregation (VPP) Implementation***

Stage 3: LDBP Update

- Comprehensive Assessment of LDBP Programs & Outcomes:
  - *Ratepayer Impacts*
  - *Cost of Service Impacts*
  - *Jobs & Economic Impacts*
  - *Environmental Impacts*
  - *Transparent Public Reporting*
- Expand & Refine LDBP Metrics
- 1st Major Update to the Local Development Business Plan
  - *Adjust Program Parameters*
  - *Integrate New Program Ideas*
  - *Adopt LDBP Implementation Framework & Timeline*

East Bay Community Energy

Local Development Business Plan

Discussion

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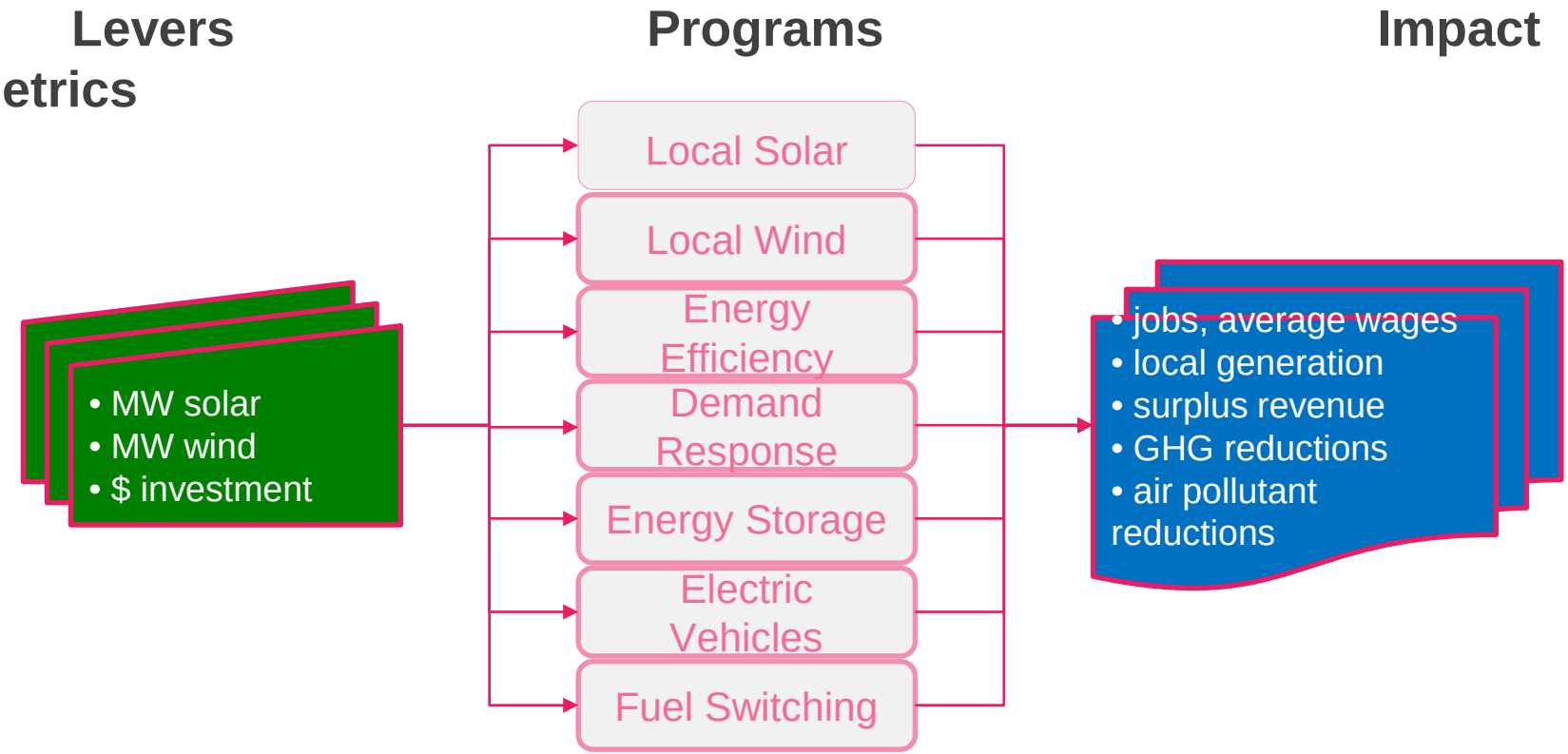
Scenario Analysis Platform

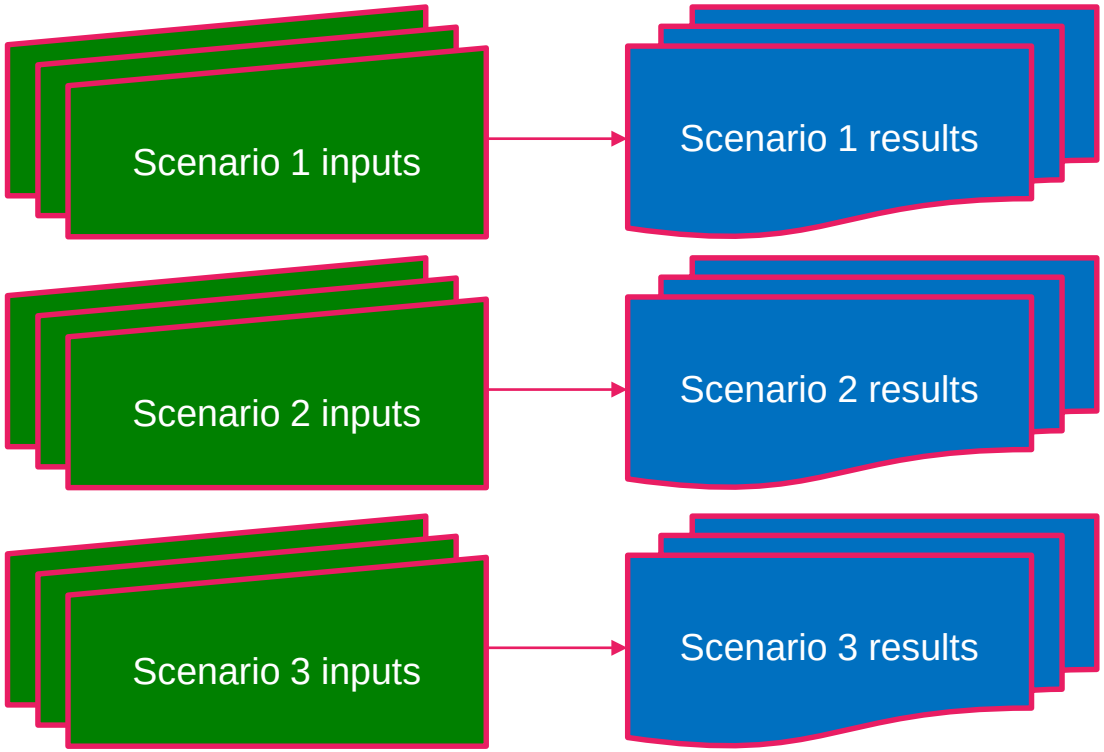
Overview

The scenario analysis decision-support platform allows EBCE to compare a variety of economic, financial, and environmental metrics from a variety of program options at the same time.

Tool Architecture



Compare Multiple Scenarios



Impact Metrics:

- Jobs
- Average wages
- Local generation
- Surplus revenue
- GHG reductions
- Air quality impacts

Input Table

Scenario: Local renewables

Local Solar

Program type	MW	2018	2019	2020	2021	2022	2023	2024	2025
FIT	50			10	20	20			
NEM	100	5	15	30	30	20			
utility	200		50		50		50		50
Total	*350*	*5*	*65*	*40*	*100*	*40*	*50*		*50*

Local Wind

Program type	MW	2018	2019	2020	2021	2022	2023	2024	2025
FIT	5			2	3				
NEM	6			2	2	2			
utility	50				50				
Total	*61*			*4*	*55*	*2*			

Energy Efficiency

Program option: Base (High C&I/MUSH)

EE type	year	M$ inv	k$CCA inv
industrial	2020	0.54	259
MUSH	2022	5.29	2,382
large commercial	2021	2.16	1,036
small/medium commercial	2023	1.96	785
residential	2023	2.93	1,844
residential (CARE)	2023	4.17	4,173
	Total	*17.05*	*10,479*

Demand Response

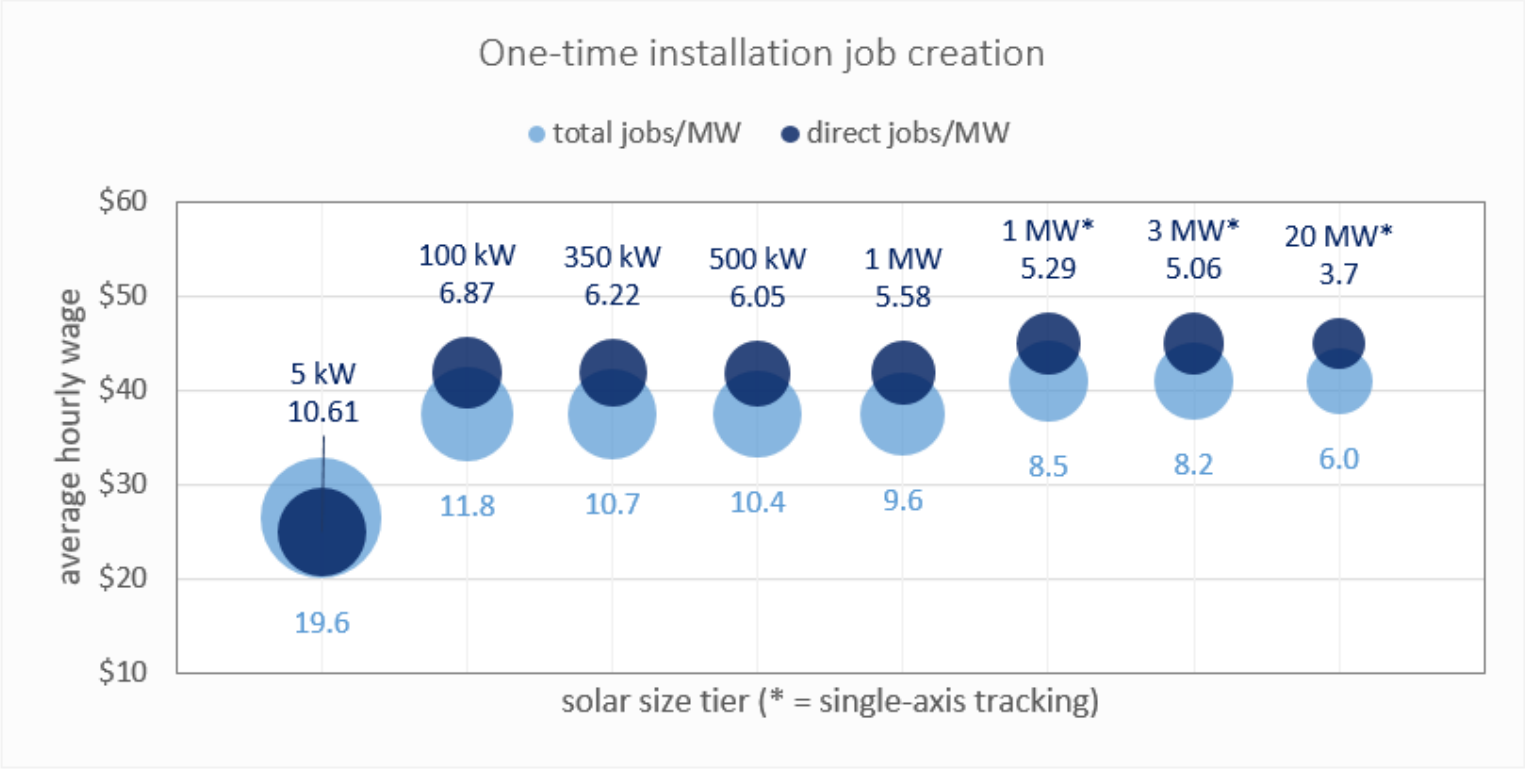
DR type	year	M$ inv	k$CCA inv
direct load control: residential storage	2021	120	6,000
direct load control: non-residential storage	2020	200	10,000
tariff: base interruptible program	2023	0	0
tariff: scheduled load reduction program	2019	400	10,000
	Total	*720*	*26,000*

Energy Storage

Metric Comparison Table

scenario:	Moderate	Local renewables	Grid innovation
Inputs			
FIT program [MW]	30	55	35
Local Solar	25	50	30
Local Wind	5	5	5
NEM program [MW]	106	106	106
Local Solar	100	100	100
Local Wind	6	6	6
utility-scale renewables [MW]	250	250	250
Local Solar	200	200	200
Local Wind	50	50	50
community investment [M$]	72.44	64.20	107.66
Energy Efficiency	15.72	10.48	19.21
Demand Response	29.00	26.00	38.00
Energy Storage	14.73	14.73	29.45
Electric Vehicles	13.00	13.00	21.00
Outputs			
total net surplus revenue [M$]	257.30	273.51	234.39
Rate Reduction	(64.00)	(64.00)	(64.00)
revenue change [M$]	(37.70)	(21.49)	(60.61)
Local Solar	(23.58)	(33.15)	(26.77)
Local Wind	(3.07)	(3.07)	(3.07)
Energy Efficiency	(16.28)	(10.85)	(19.90)
Demand Response	39.52	55.50	48.61
Energy Storage	(13.12)	(13.12)	(26.24)
Electric Vehicles	(12.40)	(12.40)	(20.10)
Fuel Switching	(8.77)	(4.38)	(13.15)
peak local generation [GWh/yr]	714	759	723
Local Solar	604	649	613
Local Wind	110	110	110
GHG reductions [MT CO2e]	393,084	299,295	502,716
Energy Efficiency	259,708	173,138	317,420
Demand Response	78,327	72,697	102,721
Electric Vehicles	51,870	51,870	77,805
Fuel Switching	3,180	1,590	4,770
NOx reductions [kg NOx]	67,348	66,104	101,022
Electric Vehicles	64,860	64,860	97,290
Fuel Switching	2,488	1,244	3,732
jobs [#]	5,494	5,134	6,361
Local Solar	3,223	3,472	3,276
Local Wind	244	244	244
Energy Efficiency	270	180	330
Demand Response	830	602	1,089
Energy Storage	59	59	117
Electric Vehicles	287	287	434

Insights


One-time installation job creation
total jobs/MW
direct jobs/MW
average hourly wage
$60
$50
$40
$30
$20
$10
5 kW
10.61
19.6
100 kW
6.87
11.8
350 kW
6.22
10.7
500 kW
6.05
10.4
1 MW
5.58
9.6
1 MW*
5.29
8.5
3 MW*
5.06
8.2
20 MW*
3.7
6.0
solar size tier (* = single-axis tracking)

Conclusions

Data supports and improves decision-making, but in a region as diverse as EBCE’s territory there is no one clear cut path. Scenario analysis enables comparison of multiple paths and metrics. EBCE should be commended for its commitment to this transparent and balanced approach.