PENINSULA CLEAN ENERGY

Peninsula Clean Energy
Board of Directors Regular Meeting

April 25, 2024

The meeting will begin shortly. Thank you!

Agenda

- Call to Order / Roll Call
- Public Comment (for items not on the Agenda)
    - Please note, send any chats to Board Clerk, Nelly Wogberg
- Closed Session
- Action to set the Agenda and Approve Consent Items 1-7
    - Consent - Public Comment
- Regular Agenda
- Adjournment

PENINSULA CLEAN ENERGY

Closed Session

The Board is currently in Closed Session.
We anticipate they will return by 6:50 p.m.

Agenda

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- Adjournment

PENINSULA CLEAN ENERGY

Chair Report (Discussion)

PENINSULA CLEAN ENERGY

CEO Report (Discussion)

CalCCA Annual Conference

- Successful annual conference in San Jose!
- PCE was the recipient of the CalCCA **Community Impact Award** for our **EV Ready Program** in the Decarbonization Category
- A number of PCE Board Members attended the **Elected Officials Luncheon** and were able to connect with Board Members from our sister agencies


CalCCA Annual Conference
CalCCA
Annual
Conference

Programs Update

- Member Agency Energy Grants
  - Los Banos – for heat pump HVAC systems across their facilities
  - San Bruno – for LED streetlight including ones with solar/storage backup

- GovPV Update
  - Intermountain Electric is experiencing significant financial difficulties; jointly agreed to terminate contract
  - Remaining Round 1 projects have been transferred to our round 2 construction firm, McMillan Electric; key staff hired and materials have been transferred
  - The contract with McMillan has been executed and McMillan will begin work immediately, prioritizing the round 1 sites in construction; key terms and contract value remain consistent
  - McMillan is a local union firm selected through a competitive process and approved by the Board in January

Legislative Update

- CA Department of Housing and Community Development (HCD) Advisory Committee voted 8-1 to adopt PCE's suggest language around Level 1 EV Chargers

- SB 1095 (Becker)
- SB 1130 (Bradford)
- AB 2815 (Petrie-Norris)

- Federal Community Funding request of $2M is now submitted to our entire delegation; should know more in about a month

PCE in the Community

- 4/26/2024 South San Francisco High School Assembly
- 4/27/2024 Foster City Earth Day
- 4/27/2024 Children's Day, Dia del Nino in San Bruno
- 4/30/2024 San Mateo County Sustainable Schools Summit
- 5/5/2024 Peninsula Temple Sholom Presentation
- 5/5/2024 Cinco de Mayo Festival in East Palo Alto
- 5/8/2024 Burlingame Library Electrification Workshop
- 5/18/2024 Los Banos Home Fair 2024 5/23/2024 Pacheco High School Wax Museum

Upcoming Member Agency Briefings

- Menlo Park - May 7
- Atherton - May 15
- San Carlos - May 28
- East Palo Alto - June 4
- Foster City - July 15
- South San Francisco - August 14
- County of San Mateo - August 27
- Millbrae - September 10
- Portola Valley - September 25

Staffing Update

Welcome!

- Kelly Lew-Quintal, Risk Manager - April 16
- Melanie Jasper, Associate Programs Manager, EV - May 16

Currently Posted Positions

Please help us spread the word!

- Data Engineer/Analyst
- Analyst/Senior Analyst, Building Electrification Support
- Senior Manager, Strategic Analysis and Rates

https://www.peninsulacleanenergy.com/join-our-team

Upcoming Meetings

- Citizens Advisory Committee:
  - Thursday, May 9 at 6:30 p.m.
- Audit and Finance Committee:
  - Monday, May 13 at 8:30 a.m.
- Executive Committee:
  - Monday, May 13 at 10:00 a.m.
- Board of Directors:
  - Thursday, May 23 at 6:30 pm

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CAC Report (Discussion)

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Approval of Appointments to the Executive Committee and the Audit and Finance Committee (Action)

Proposed Committee Appointments

Executive Committee

1. Dave Pine, San Mateo County
2. Ray Mueller, San Mateo County
3. Rick DeGolia, Atherton
4. Coleen Mackin, Brisbane
5. Donna Colson, Burlingame, Chair
6. Betsy Nash, Menlo Park
7. Anders Fung, Millbrae
8. Jeff Aalfs, Portola Valley
9. Marty Medina, San Bruno, Vice Chair

Audit & Finance Committee

1. Tom McCune, Belmont
2. Donna Colson, Burlingame
3. Carlos Romero, East Palo Alto
4. Leslie Ragsdale, Hillsborough
5. Paul Llanez, Los Banos

Indicates New Members

PENINSULA CLEAN ENERGY

Adjusting PCE's 24/7 Renewable Goal

Board of Directors Meeting

April 25, 2024

Recommendation

- Update Peninsula Clean Energy's Strategic Plan Organizational Priority #1 to:

“Deliver 100% renewable energy on an annual basis by 2030 through strategic and cost-effective procurement of resources that maximize PCE's 24/7 hourly matching of renewable energy and load”

Agenda

- Introduction
- Analysis – Assumptions
- Analysis - Results
- Options and Recommendation

PENINSULA CLEAN ENERGY

Introduction

Background

- In June 2023, the Board updated the strategic priority to ***Delivering 100% renewable energy annually by 2025 and on a 99% time-coincident basis by 2027***
- In November 2023, Staff discussed the status and challenges of meeting PCE's 24/7 goal with the Procurement Subcommittee and the Board
- In March 2024, the Board updated the strategic priority statement to ***Delivering 100% Renewable Energy Annually by 2030 Through Strategic Procurement of Resources to Maximize Peninsula Clean Energy's 24/7 Hourly Renewable Matching***

Focuses since November 2023

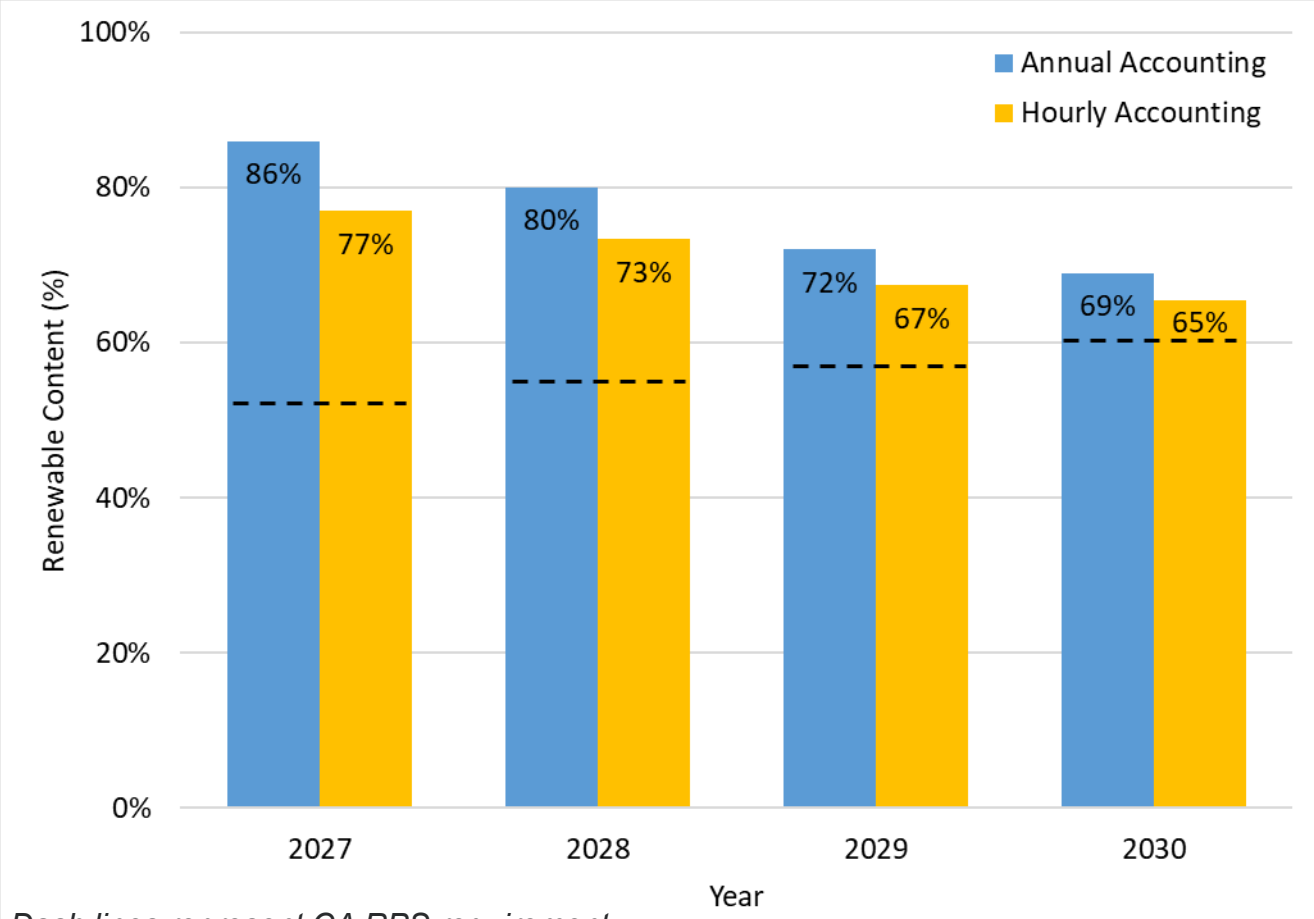
- In November 2023, staff and the Procurement Subcommittee concluded that achieving a 99% time-coincident target by 2027 would be infeasible;
- Staff was tasked to explore options to adjust the hourly matching goal and to bring the item back to the Board in Q1 of 2024;
- Since November, staff completed the following steps in the analysis:
  - Refreshed modeling with new inputs and assumptions (i.e. new market price forecasts, new resource availability and pricing, and the ability to resell excess products)
  - Explored methods to maintain the time-coincident target after the initial year
  - Developed more flexible structures in meeting the goal while minimizing cost and risk

Recap of Current Challenges

- Lack of desirable resources (wind, geothermal, shaped)
- Significant delays in development and commercial operation of new renewable projects
- Market conditions have drastically changed in the past two years resulting in record high Energy, RA, and REC prices
- No industry standard to account for hourly renewable matching
- Planning target could be in conflict with operational strategy

Snapshot with Current Resource Portfolio

- PCE can achieve **86%** annual renewable and **77%** hourly matching by 2027.
  - With no additional resource procurement
- SB 100: 60% RPS by 2030 and 100% carbon-free by 2045
  - PCE will meet the 60% target 5 years ahead of schedule in 2025.



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Analysis - Assumptions

Input Variables Considered in the Planning Analysis

- Variable 1: Availability of resources
  - Realistic Case vs Optimistic Case
- Variable 2: Market Price Scenarios
  - Low vs High Market Prices
- Variable 3: Resale Scenarios
  - Assumptions around different structures to sell excess energy, RA, and REC

NOTE: Analysis target year shifted from 2027 to 2030

Input Variable 1: Resource Availability

Year	Resource	Realistic Case	Optimistic Case
2027-2028	New Solar + Storage	!	!
	New Wind	✗	✗
	New Shaped	✗	✗
	New Geothermal	✗	✗
	Extend Existing Wind	✗	✓
2029 - 2031	New Solar + Storage	✓	✓
	New Wind	✗	!
	New Shaped	✗	!
	New Geothermal	✗	!
	Extend Existing Wind	✗	✓

Legend	
✗	Not Available
!	Limited Availability
✓	Potentially Available

Staff expects to execute 1~2 more new **standalone** storage resources to optimize our portfolio, which are available in the near-term.

Input Variable 2: Market Price Scenarios

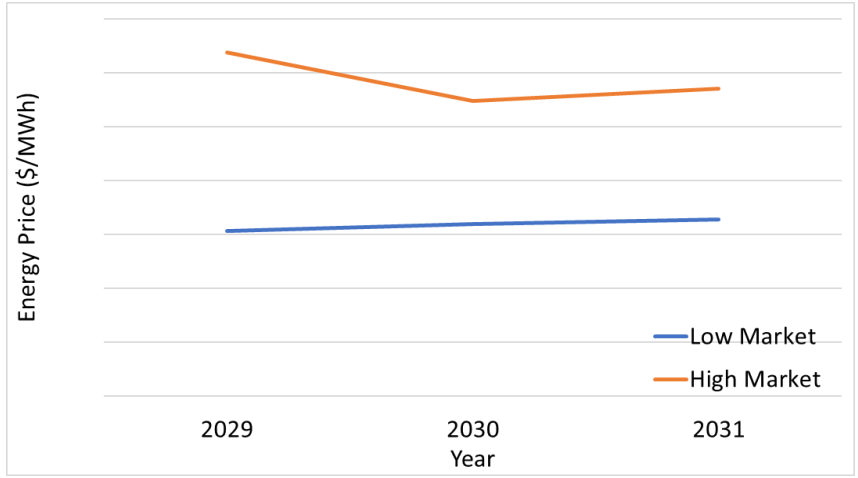
Two Scenarios: Low Market and High Market

Captures uncertainties around:

- Market prices for Energy, RA and RECs
- Ability to resell excess products (volume and price)

Variables	High Market*	Low Market*
% Excess Energy Sold	100%	50%
% Excess REC Sold	95%	50%
% Excess RA Sold	95%	80%

* These scenarios don't represent the extreme cases.



Low Market presents more challenges in reselling PCE's excess products to recover costs => More Risk!

Input Variable 3: Resale Scenarios

Resale Scenarios	Bundled Sale	Unbundled Sale
Conservative	100%	0%
Aggressive	0%	100%
Medium	60%	40%

- **Bundled Products:** Long/mid-term sale of excess energy, RA, and REC as a bundled product
- **Unbundled Products:** Short term sale of excess Energy, RA, and REC as standalone products

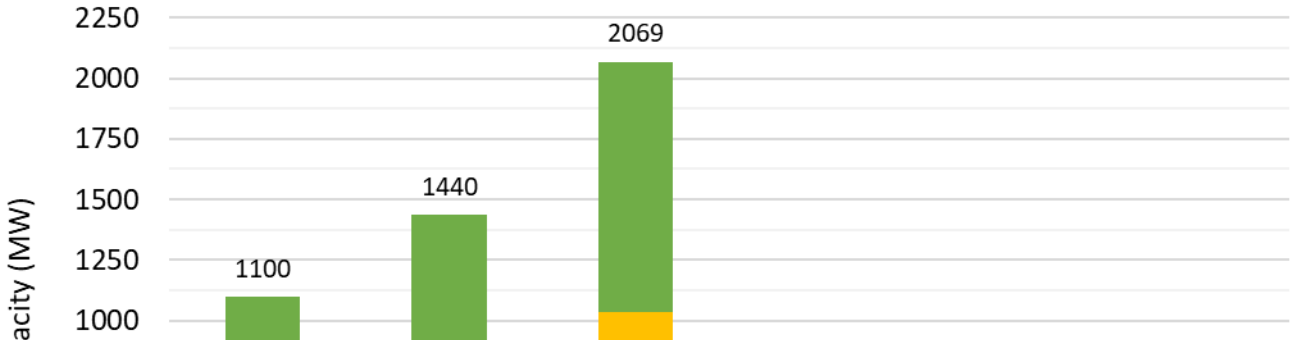
- Achieving high time-coincident goal will result in over-procurement, and the need to resell any excess products
- There is no guarantee that all the excess could be sold to recover costs, therefore creating uncertainties on cost impacts
- To reduce the resale uncertainties, staff recommends minimizing over-procurement by 1) finding best-fit resources, and 2) pursuing a more flexible goal

PENINSULA CLEAN ENERGY

Analysis - Results

Additional Capacity Needed by 2030

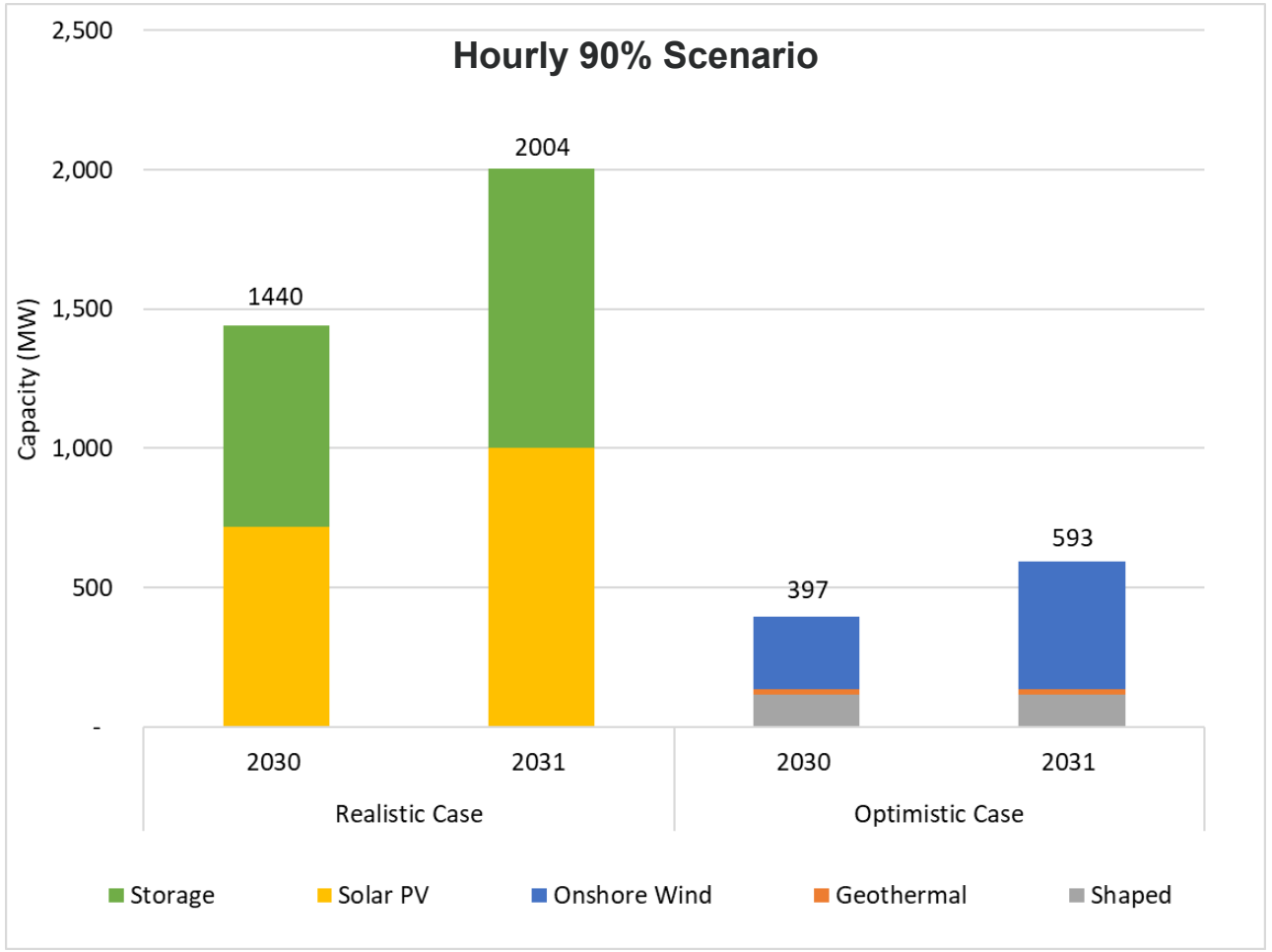
- Under the **Realistic** case, PCE will need to procure significant amount of additional capacity to achieve higher time-coincident targets.
- Under the **Optimistic** case, a more desirable set of available resources could significantly reduce over-procurement.
- In general, the Annual 100% Renewable scenario could achieve:
  - **85-90%** hourly matching under Optimistic Case
  - **80-85%** hourly matching under Realistic Case



	Realistic Case			Optimistic Case		
	Annual 100%	Hourly 90%	Hourly 95%	Annual 100%	Hourly 90%	Hourly 95%
Total	1100	1440	2069	389	397	442
Storage	550	720	1034	0	0	0
Onshore Wind	0	0	0	254	262	283
Solar PV	550	720	1034	0	0	0
Geothermal	0	0	0	20	20	44
Shaped	0	0	0	115	115	115

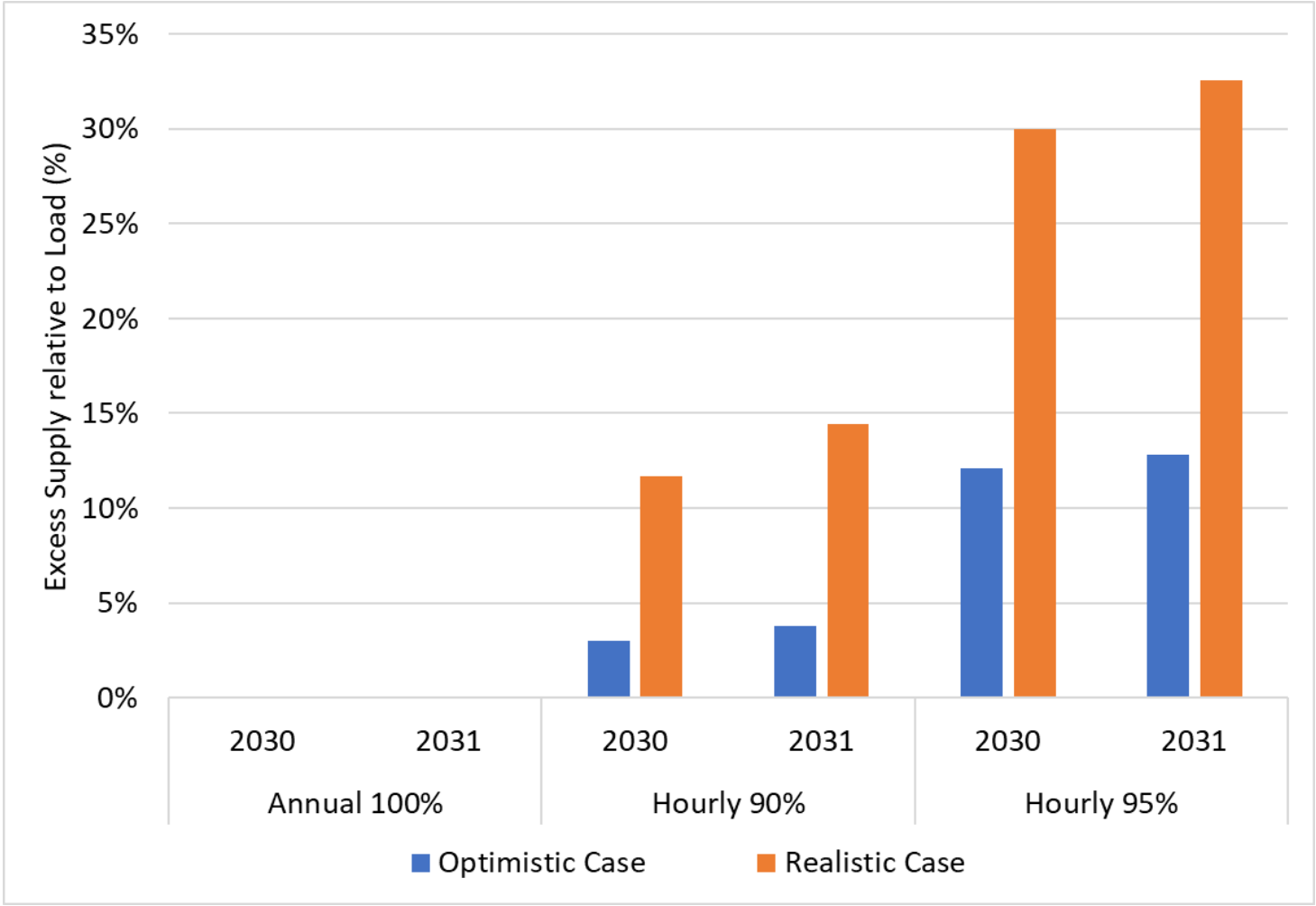
Maintaining Hourly Goal over Time

To maintain time-coincident % over time, PCE will need to procure additional resources to address expiration of short/mid-term contracts, organic increase in load, new customers joining PCE, and projects failing to come online.

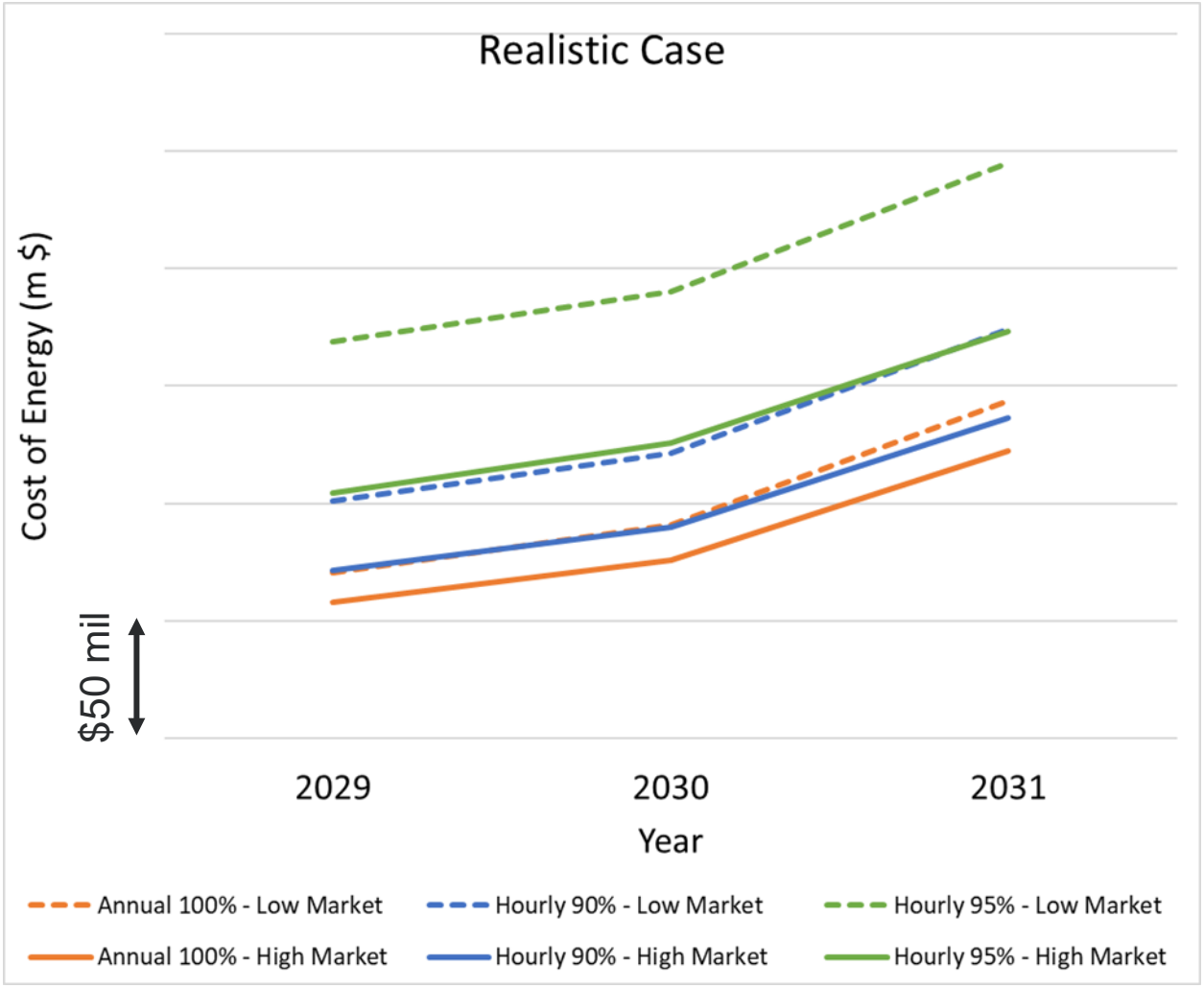


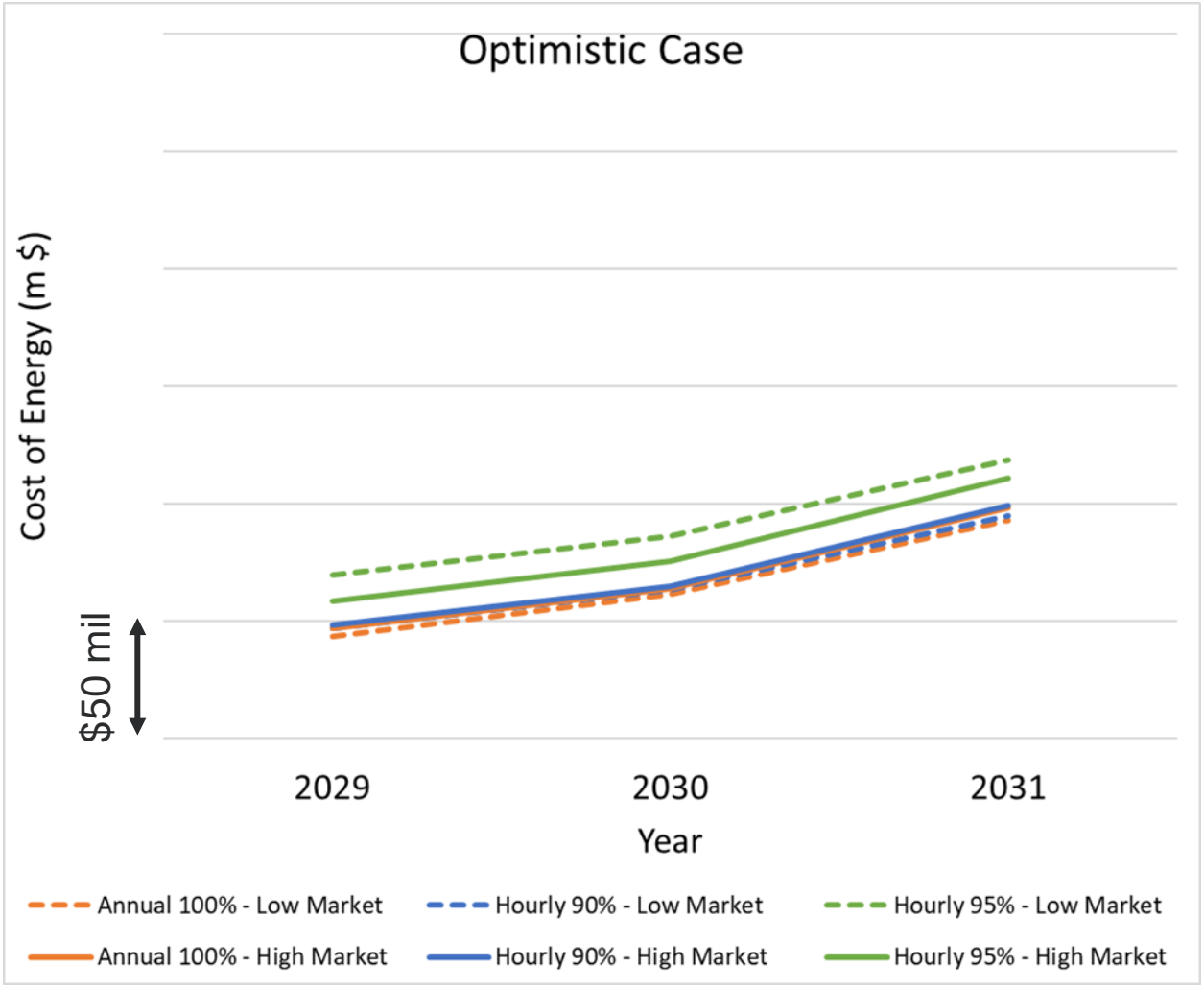
The Over-Procurement Issue

- Higher time-coincident targets could result in more over-procurement, especially under the **Realistic** case.
- The Annual 100% Renewable scenario will not create excess generation relative to annual load while maintaining relatively high hourly matching by default.



Cost Comparison of 24/7 Scenarios





Summary of Results

- PCE could achieve ~77% time-coincident goal by 2027 with its current portfolio
  - Meeting any higher time-coincident target in 2027-2029 would be infeasible given current market conditions, project delays and lack of desirable resources;
- PCE could achieve ~80-85% time-coincident by 2030 upon reaching 100% annual renewable;
  - Meeting any higher time-coincident target by 2030 could be costly and risky to PCE;
- Differences in emission and grid impacts between PCE's 85% and 95% time-coincident renewable target would be small given PCE’s load relative to the entire grid;
- If/when best-fit resources become available in the market, cost-effectively achieving a time-coincident target above 90% would become possible.

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Options and Recommendation

24/7 Goal - Options to Consider for 2030 and Beyond

1. Adjust time-coincident % and target year
   - Lower time-coincident percentage and shift target year to beyond 2030
2. Use an average 24/7 target starting in 2030
   - Set a time-coincident target averaged over a 5-year measurement period. This means the time-coincident percentage could fluctuate within the period, but the average time-coincident percentage over the 5-year period would meet the approved target.
3. Maintain 100% Annual goal with a **flexible** hourly goal
   - Maintain 100% annual renewable goal every year through strategic procurement of resources to maximize hourly matching

Comparing Options

Considerations	Option 1 Adjust Target to 2030	Option 2 Use Average Target	Option 3 Flexible Hourly Goal
Consistent with Current Strategy	☑	☒	☒
Cost Containment and Risk Reduction	☒	☑	☑+
Flexibility to Address Load Increase and Contract Expiration	☒	☑	☑+
Minimize Over-procurement	☒	☒	☑
Maximize Operational Flexibility	☒	☒	☑
Easy to Communicate to Public	☑	☒	☑-

With input from the Procurement Subcommittee, staff recommends pursuing Option 3 – Maintain 100% Annual Goal with a Flexible Hourly Target

Recommendation

- Update Peninsula Clean Energy's Strategic Plan Organizational Priority #1 to:

“Deliver 100% renewable energy on an annual basis by 2030 through strategic and cost-effective procurement of resources that maximize PCE's 24/7 hourly matching of renewable energy and load”

PENINSULA CLEAN ENERGY

Prepay Transaction

Board of Directors Meeting

April 25, 2024

Background

- Prepay is a long-term financial transaction available to tax-exempt entities, such as CCAs, that enable meaningful power procurement cost savings
  - Savings based on spread between taxable and tax-exempt interest rates
  - Codified in US tax law
- Historically utilized for natural gas procurement, now being applied in renewable energy sector
- To date, 11 CCA Prepay transactions generating ~$60 million annual savings (see next page)
- Savings of 8-12% based on current market conditions
- Initial PCE transaction could generate $3.5 million of annual savings (assumes 3 existing PPAs; amount to be refined)
- Process will take 6-9 months and requires engagement of multiple advisors and membership in California Community Choice Finance Authority (CCCFA)
- Audit & Finance Committee has been briefed on the topic twice (June 2023 and February 2024), and the Executive Committee recently unanimously approved pursuing a possible transaction

CCCFA Pre-Pay Transactions

Date	Project Participant(s)	Par ($M)	Prepaid Supplier	Annual Savings ($M)	Discount[1]
September 2021	East Bay Clean Energy/Silicon Valley Clean Energy	$1,235	Morgan Stanley	4.2	7.3%
November 2021	Marin Clean Energy	603	Goldman Sachs	3.2	10.0%
July 2022	East Bay Clean Energy	931	Morgan Stanley	4.8	9.0%
January 2023	Pioneer Community Energy	460	Goldman Sachs	2.4	n/a
January 2023	Silicon Valley Clean Energy Authority	842	Morgan Stanley	4.7	9.5%
February 2023	Clean Power Alliance	999	Goldman Sachs	8.3	13.6%
June 2023	Clean Power Alliance	958	Goldman Sachs	6.4	12.0%
August 2023	East Bay Community Energy Authority	998	Goldman Sachs	6.1	12.2%
October 2023	Central Coast Community Energy	648	Morgan Stanley	5.0	12.2%
December 2023	Marin Clean Energy	1,038	Goldman Sachs	6.8	12.0%
January 2024	Silicon Valley Clean Energy	1,102	Morgan Stanley	7.7	13.1%
		$ 9,813		**$59.6**	

San Jose Clean Energy, Clean Power Alliance, and San Diego Community Power are planning to proceed with transactions

1. Goldman and Morgan Stanley calculate discount differently, so hard to compare apples-to-apples

Benefits and Rationale

1. Source of cost savings that can **lower customer rates**
   - 8-12% on power quantities delivered, or ~$3.5 million per year based on indicative terms on an initial transaction
   - Savings fluctuate depending on market conditions and size of transaction
   - Can execute additional transactions over time to increase amount of savings (limitation based on investor demand, market conditions, and PCE forecasted load)

2. Service provider fees paid from bond proceeds on a contingency basis
   - If bonds are not issued, service providers are not paid
   - Only “sunk” costs are staff time, CCCFA membership ($50k), and rating agency (~$200k)

3. PCE not responsible for bond repayment / debt non-recourse to PCE

Risk/Considerations and Mitigations

Prepay terminates earlier than expected	Savings realized through termination date and PCE no worse off
Market timing	Possibility of multiple Prepays hedges timing risk
Staff time	Leverage prior CCCFA transactions and support from Financial Advisor
Increased settlement complexity	Potentially hire additional back-office staff

Assembling the Pre-Pay Deal Team

Peninsula Clean Energy

Entities selected by PCE

Municipal Advisor

- Financial advisory
- Advice on structure, timing and terms
- Fiduciary responsibility to CCA
- PFM(1)

Prepay Counsel

- Legal advisory
- Represents CCA's interests
- Chapman and Cutler (1)

Conduit Issuer

- Issuer of tax-exempt bonds
- CCCFA

Prepaid Supplier

- Structures transaction
- Markets and underwrites bonds
- Morgan Stanley, Goldman or RBC (1)

Other Entities in Prepay Deal

Custodian / Trustee

- Manges prepay estate
- Bond interest payments
- US Bank or Wells Fargo (1)

Rating Agency

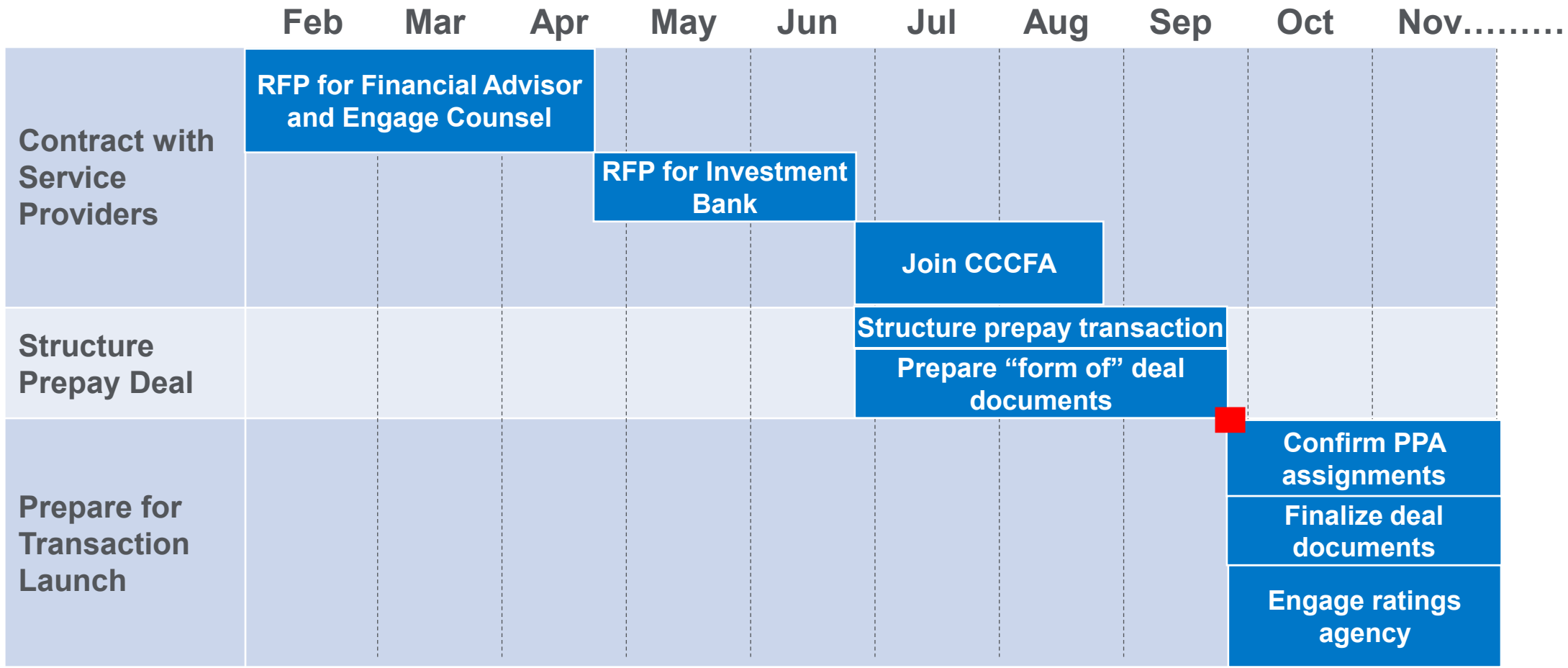
- Rates bonds
- Moody's

Bond / Tax Counsel

- Legal services
- Affirms tax-exempt bond status and validity of bond offering
- Orrick(1)

Green Font = potential service providers
(1) Fees paid on contingency from Bond proceeds

Preliminary Timeline



■ Board approval of transaction

Recommendations and Next Steps

- Approval to continue evaluation and preparation for a possible Prepay transaction
  - Savings are material, risks are negligible, and upfront costs are minimal
  - Can pause process at any time

- Approval to engage selected advisors (paid on contingency)
  - PFM Financial Advisors as Financial Advisor
  - Chapman and Cutler as Prepay Counsel
  - Orrick, Herrington & Sutcliffe as Bond and Tax Counsel (engaged by CCCFA)

- Approval to join CCCFA as an associate member at the appropriate time (late summer or early Fall)

- Staff will return to the Audit & Finance Committee and Executive Committee with periodic updates and will seek Board approval of a transaction prior to launch

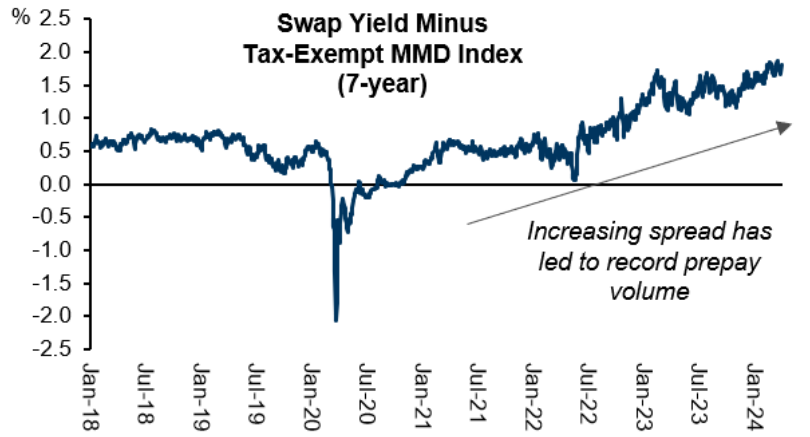
PENINSULA CLEAN ENERGY

Appendix

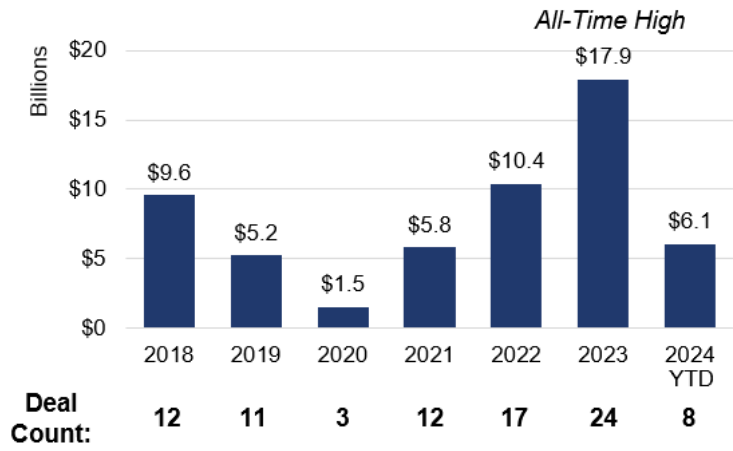
Why Now?

- **Elevated Interest Rate Environment**: Tax-exempt bonds' yield advantage versus corporate rates is the greatest in over a decade
- **Procurement of Renewables with PPAs is Commonplace:** PCE has a portfolio of PPAs suitable for one or more Prepay transaction
- **Prepay Documentation is Tried and True:** Structure has evolved over the years so that current documents optimize savings, minimize participant risks, and provide for seamless monthly settlements

Indicator of Prepay Net Spread, 2018-Present



Total Prepay Issuance, 2018-Present



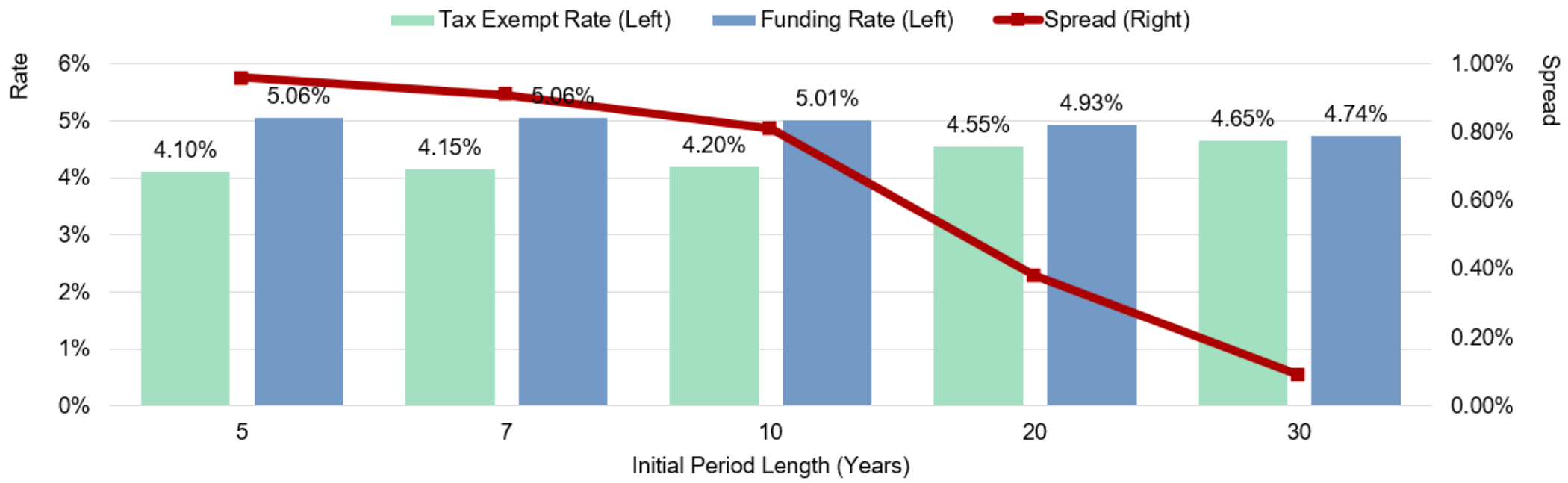
Sources: Refinitiv; Official Statements, SDC transaction data, MSRB EMMA.

Indicative PCE Prepay Transaction Terms

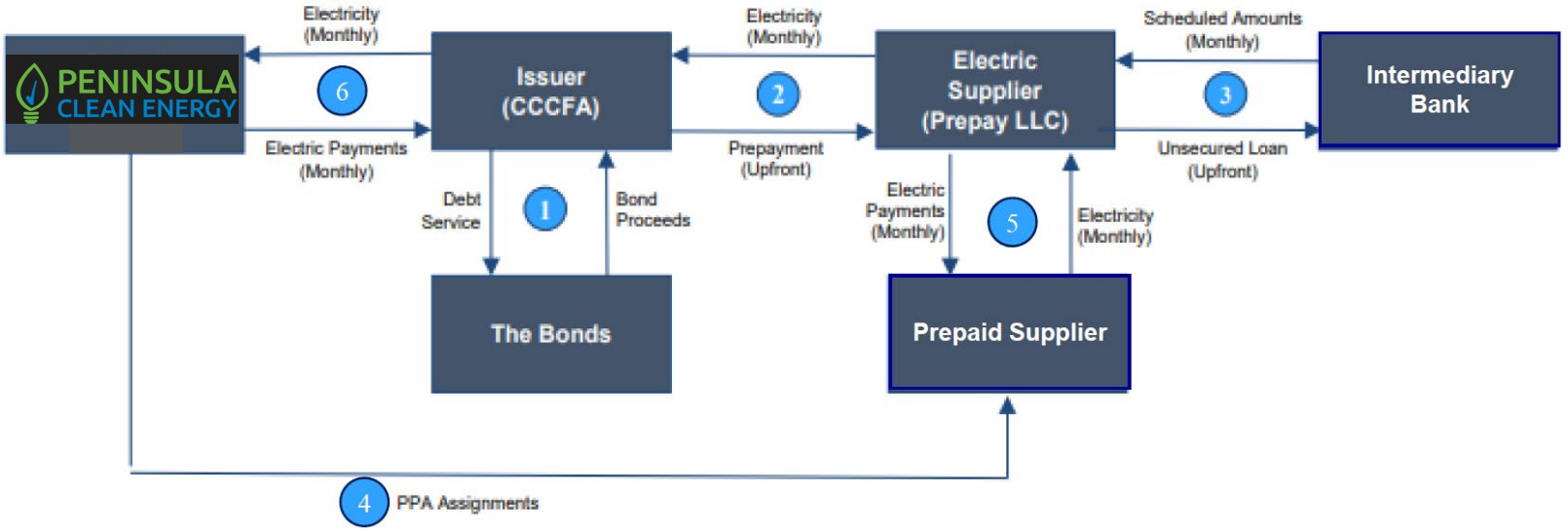
- Initial bond offering (pre-payment amount) of $550 million
  - Assumes assignment of three operating PPAs, representing 1 million MWh annually
  - Notional value of assigned contracts over 30-years ~$1 billion
  - PCE can assign additional PPAs to increase size of transaction or execute subsequent transactions
- Initial savings of ~$3.5 million per year, or ~10% of contracted PPA payments
- Savings locked-in for 6-8 years, after which bonds are reissued with a minimum discount of 5% (to be negotiated)
  - If minimum savings not met at reissuance date, PCE can walk away from transaction and assigned PPAs are put back to PCE; PCE forgoes future savings
- Transaction fees, including advisors, payable from proceeds of the bond offering and included in savings analysis

Maximizing Savings

- Savings driven by the “spread” between tax-exempt and taxable interest rates
- Recent transactions, on average, have priced with 6-8 year initial periods to strike a balance between savings and length of initial term



Transaction Diagram



Initial Issuance and Cash Flows

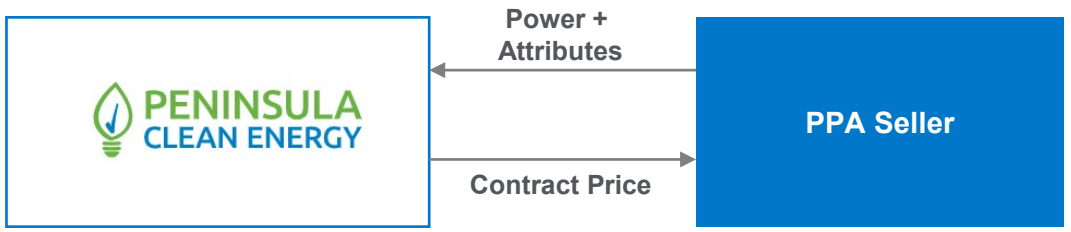
1. Debt Issuance – CCCFA issues tax-exempt bonds
2. Prepayment – CCCFA remits bond proceeds to Prepay LLC in return for 30 years of assigned electricity deliveries
3. Unsecured Loan – Prepay LLC loans bond proceeds to Intermediary Bank. Bank makes fixed monthly payments to Prepay LLC equal to assigned electricity multiplied by PPA price

Monthly Cash / Energy Flows

4. Assigned PPAs – PCE assigns to Prepaid Supplier certain rights and obligations as Buyer; Prepaid Supplier makes monthly payments to PPA counterparties for assigned delivered energy
5. Electricity Supply – Prepay LLC enters into long-term agreement to purchase electricity from Prepaid Supplier to match assigned electricity quantities/terms
6. Project Participant – CCCFA sells PCE all assigned electricity delivered by Prepay LLC at the **discounted** prepay price

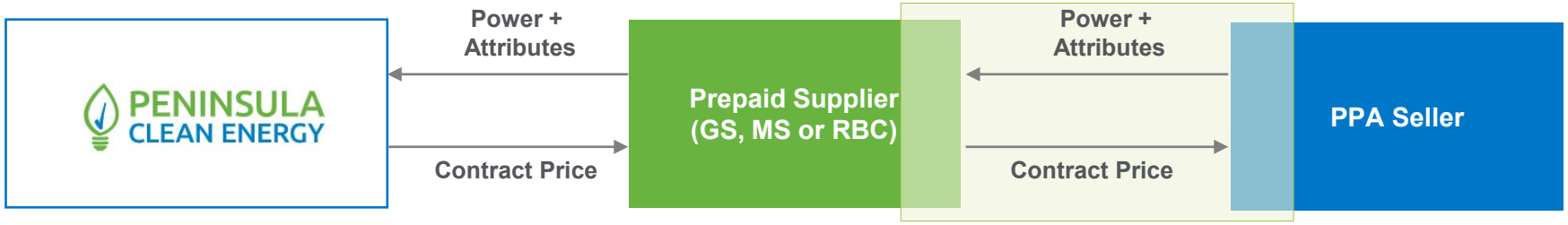
PPA Assignment Concept

Status Quo



- PCE enters into a PPA with PPA Seller
- PPA Seller delivers as generated power/attributes
- PCE pays monthly for as-generated power and attributes

Proposal



In event the Prepaid Supplier fails to perform, PCE guarantees payment

- Structures remains the same, but instead of facing PCE, the PPA Seller faces Goldman Sachs, Morgan Stanley or RBC
- If the Prepaid Supplier fails to pay, PCE guarantees payments (which it is able to recoup from the Prepay Trust Estate)
- Under certain scenarios, assignment can be terminated, and PPA Seller goes back to facing PCE
- The existing Scheduling Coordinator will remain the Scheduling Coordinator; only change is that the Prepaid Supplier is copied on bills

PENINSULA CLEAN ENERGY

Zero-CI Low Carbon Fuel Standard Green Tariff

Board of Directors

April 25, 2024

Agenda

- Background
- Low Carbon Fuel Standard
- Zero-CI Green Tariff
- Staff Recommendation

Background

- Caltrain electric passenger service expected for September 2024
  - Fuel costs forecast to increase 100%, from $15MM in FY24 to $30MM in FY26 (10-15% of Caltrain budget)
  - Annual revenue to PCE ~$7M
- SamTrans has ordered both Battery Electric Buses (qty 37) and Fuel Cell Electric Buses (qty 10) for its North and South Bays

Low Carbon Fuel Standard

- Program administered by California Air Resources Board (CARB)
- Establishes an annual, declining carbon intensity (CI) target for transportation fuels used in California
- Each alternative fuel is given a CI score - the lower carbon a fuel is compared to the target, the more credits can be generated
- Regulated entities that generate a deficit must buy credits to meet target CI

Electricity as a LCFS Fuel Pathway

- Default Grid Carbon Intensity
  - Customer loses value of PCE clean energy products
- Low-Carbon Intensity
  - ECOplus could qualify as a low-CI product, but would require annual 3rd party certification of each geothermal and large hydro resource
  - Considerable administrative burden and cost
- Book and Claim Zero-Carbon Intensity
  - Easily verified through WREGIS accounting
  - Provides approximately 35% more value than default grid CI

Zero-CI LCFS Fuel Pathway

- Pathway Requirements
  - Eligible renewable energy resources as defined in California Public Utilities Code sections 399.11-399.36, excluding biomass, biomethane, geothermal, and municipal solid waste
  - Must meet deliverability requirements of a PCC1 REC

- Pathway Administration
  - Stand up “Green Tariff”
  - Retire RECs to LCFS subaccount in WREGIS
  - Provide quarterly reporting from WREGIS demonstrating REC retirement

Staff Recommendation

Approve a new Zero-CI Low Carbon Fuel Standard Green Tariff to support the electrification of public transit in the Peninsula Clean Energy service area.

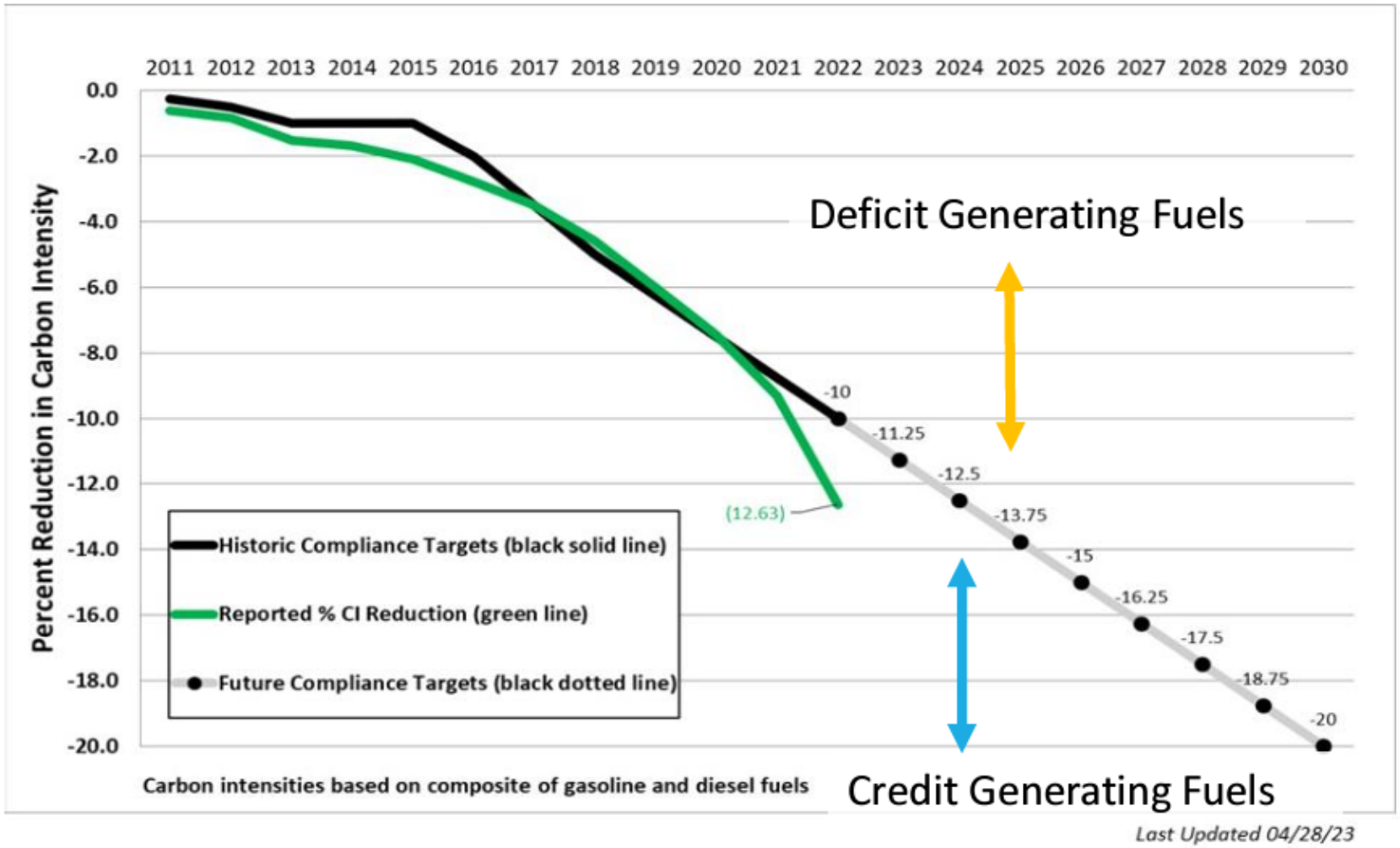
Thank you

Justin Pine

Strategic Accounts Manager

Appendix

Declining Carbon Intensity Target



Examples of LCFS credit generating fuels:

- *Renewable diesel*
- *Biodiesel*
- *Biomethane*
- *Ethanol*
- *Electricity*
- *Hydrogen*
- *Sustainable Aviation Fuel*
- *Renewable gasoline*

From CARB's Community Meeting 2023: https://ww2.arb.ca.gov/sites/default/files/2023-05/CARB%20Presentation.pdf

Committee Members' Reports

PENINSULA CLEAN ENERGY

Adjournment