



RIVERSIDE'S CLEAN ENERGY FUTURE

Riverside Public Utilities

February 8, 2021

Board of Public Utilities

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SUSTAINABILITY



Office of Sustainability shepherding collaborative efforts with city teams to identify policies, programs, and metrics to align strategic priority and sustainability goals in order to:

1. Facilitate the integration of these goals across the city organization; and
2. Nest the updating and development of department and division level action plans within the City Council's 2025 Strategic Plan and the City's forthcoming General Plan update.



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LEGISLATIVE HISTORY

Reduce GHG Emissions	Renewables & Energy Efficiency	Equity	Supporting Actions
AB 32 SB 32 AB 398 SB 1383	SB X 1-2 SB 350 SB 100 SB 1037 AB 802	SB 535 AB 617	AB 2514 AB 1110 AB 1482 SB 246 SB 379 AB 2800

Supporting Regulations:

Cap and Trade, Renewable Portfolio Standard, Existing Building Energy Efficiency Reporting, Community Air Protection Planning, Energy Storage Planning and more

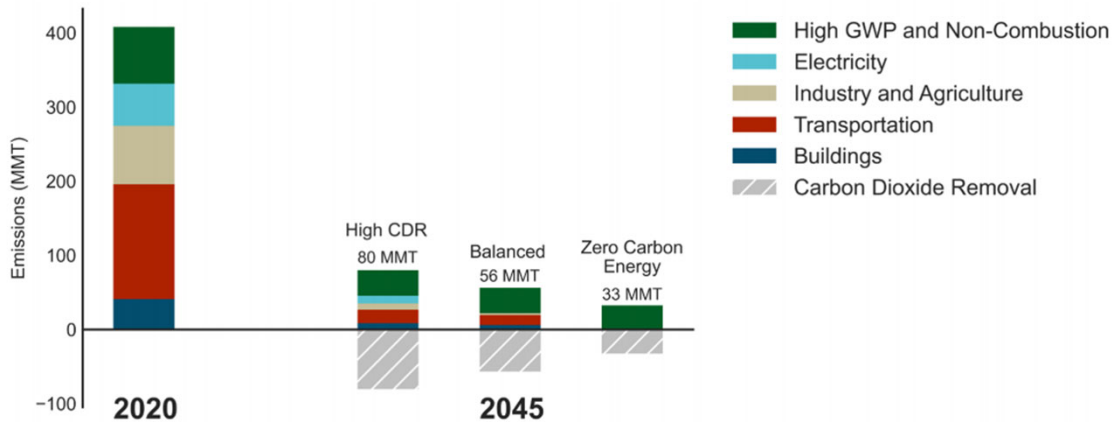
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CALIFORNIA'S GOAL: CARBON NEUTRALITY BY 2045

Figure 1. Greenhouse gas emissions by sector in 2020 and 2045, by scenario, including total CDR required to achieve carbon neutrality in 2045 (excluding potential sources from NWL)



https://ww2.arb.ca.gov/sites/default/files/2020-08/e3_cn_draft_report_aug2020.pdf

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COMPONENTS OF A CLEAN ENERGY FUTURE

Safe | Reliable | Resilient | Sustainable | Flexible | Affordable

Generation	Demand Side / Customer Generation	Integration	Customer Service and Equity
<ul style="list-style-type: none"> Renewables Non-GHG emitting Transition from fossil fuel generation Energy storage 	<ul style="list-style-type: none"> Rooftop solar Energy storage Fuel cells Energy Efficiency Renewable natural gas 	<ul style="list-style-type: none"> Distribution grid upgrades Advanced metering Building-to-grid 	<ul style="list-style-type: none"> Rates & Affordability Access to clean energy Low and fixed income support



Opportunities: Grants | Public-Private Partnerships | Incentives

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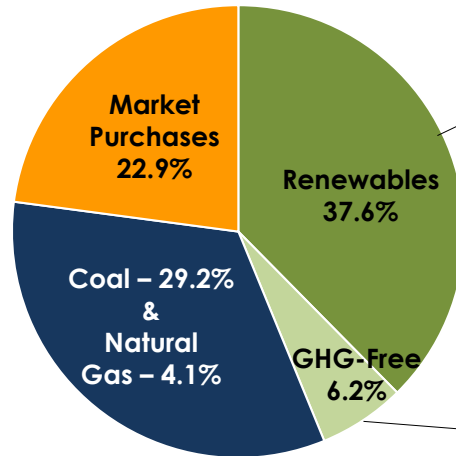
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RPU'S POWER CONTENT - 2019

43.8% of electricity sold to RPU customers in 2019 was **GHG emissions-free**

Anticipating it will be **50% for 2020**



- Wind-3.2%
- Biomass & Biowaste-0.1%
- Solar-11.8%
- Geothermal-22.5%

- Large Hydroelectric-1.3%
- Nuclear-4.1%



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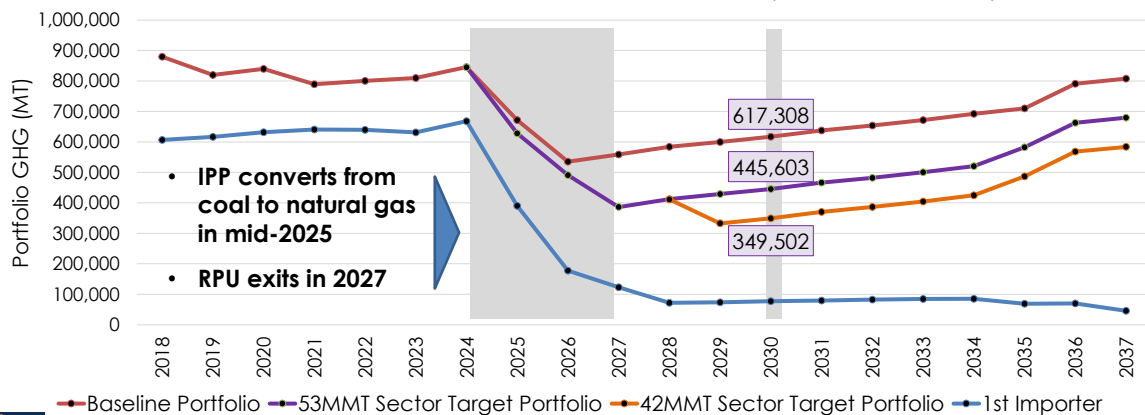
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EXIT FROM IPP

Intermountain Power Project is RPU's only coal generation facility

Total Portfolio and 1st Importer GHG Emissions: 2018 – 2037 (Source: RPU 2018 IRP)



- IPP converts from coal to natural gas in mid-2025
- RPU exits in 2027



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DEMAND-SIDE RENEWABLES

Installed Solar PV

Total installed solar PV

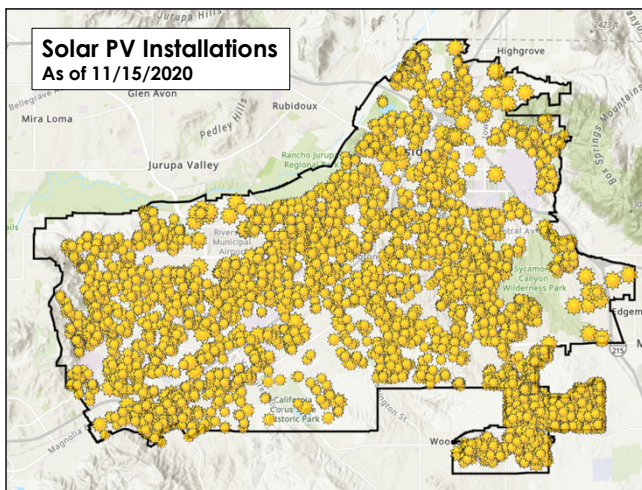
50.89 MW DC

Per capita solar PV

154.17 watts DC/person
9th highest nationally

(Frontier Group: Shining Cities 2020 Top US Cities for Solar Energy)

<https://frontiergroup.org/reports/fg/shining-cities-2020>



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INTEGRATING IT ALL

How the electricity moves from generation to user

Distribution System

Data Analytics

Use the data to make better decisions – maintenance, customer service, and investment

How to better serve customers and manage two-way energy flows

Advanced Metering & Monitoring

Rates

How to pay for the electricity, grid, and service



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CUSTOMER ACCESS AND EQUITY



Ensuring that everyone in Riverside has the opportunity to participate in the City's Clean Energy Future

1. Maintaining affordable and competitive electric rates
2. Providing support to low and fixed income customers with SHARE and other support programs
3. All customers can go 100% renewable

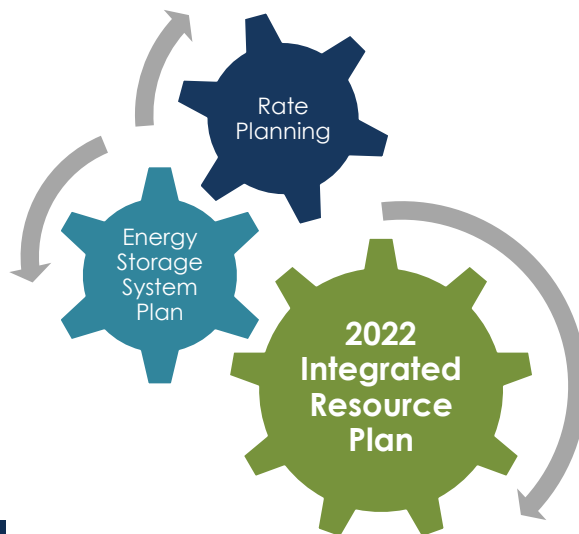


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UPCOMING EFFORTS



KEY PROCESSES FOR INPUT

Integrated Resource Plan
Due 2022

Energy Storage Planning
Annual Review

Rate Planning
Cost of Service Analysis



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GUEST SPEAKERS



Kate Meis
Executive Director
Local Government Commission



Scott Haase
Director Of Strategic Partnerships
National Renewable Energy Laboratory



Dr. Matthew Barth
Director of CE-CERT
University of California, Riverside



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GUEST SPEAKER KATE MEIS, LOCAL GOVERNMENT COMMISSION

Getting to
**Carbon
Zero**

Equity & Foundational Principles



Built Environment



Mobility



**Community Health
& Resiliency**



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GUEST SPEAKER SCOTT HAASE, NREL

Common Opportunities for City-wide Clean Energy and Climate Goal Achievement



City Leading By Example *Immediate Opportunities*

- Continued efficiency for City buildings, PV opportunities
- PV- and EV-ready new construction
- City policy development
- Fleet electrification



Whole Community Opportunities *Near Term*

- Income-qualified & bulk purchasing for efficiency
- Ambitious local solar generation
- EV charging networks
- Electrification of busses
- Medium and heavy-duty fleet conversion



Envisioning 100% Renewable Energy *Long Term*

- Switching from fossil fuel heating and cooking
- 100% renewable energy transportation
- Role of storage and ability to meet peak demands with Hydrogen or renewable gas

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RECOMMENDATION

That the Board of Public Utilities conduct a workshop for questions, comments and discussion on Riverside's Clean Energy Future.



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