

BEST PRACTICE SERIES:DECARBONIZING POWER GENERATIONASSET TYPE:ONSHORE OPERATIONSPROVIDER:CHEVRON

BEST PRACTICE SERIES

Using solar PV in an oil and gas field

A 29 MWac (~75 GWh/yr) behind-the-meter solar photovoltaic (PV) plant was built to supply electricity to a conventional oil and gas field. Excess power is exported to a utility grid through a net energy metering agreement to help offset costs and GHG emissions for grid electricity purchased during non-sunlight hours.

Oil and gas field solar plant

The solar plant occupies about **220** acres of land adjacent to the field operations.



☆ Benefits

- Generating California Low
 Carbon Fuel Standard
 credits
- Lower oil field carbon intensity
- Energy operational expenditure savings

(i) Implementation

- 2016: Project started
- 2020: Project commissioned

🖂 Key Learnings

• Planning and stakeholder alignment are critical for permit approvals, completion of utility interconnection studies, and safe and reliable integration into existing oil field operations

Additional Resources:

- <u>Powering an Oil Field: Leave it to the Sun Chevron</u>
- Lost Hills Solar Project: Powering an Oil and Gas Field with California Sunshine, <u>https://doi.org/10.2118/200839-PA</u>
- Integrating Renewable Energy Behind the Meter in Upstream Oil and Gas Operations: A Practical Guide, <u>10.1109/TIA.2024.3392718</u>
- Integrating Renewable Energy Behind-The-Meter In Upstream Oil and Gas Operations - Part II, 10.1109/PCIC43643.2023.10414320

This Best Practice Series was conceived by our member companies in order to share practical examples of energy efficiencies that can be used by other organisations

