



focusing on environmental issues

we protect the environment through innovative and responsible operations

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Michael McDonald
Environmental
Team Lead



“Success in environmental stewardship comes down to increasing effectiveness by reducing complexity and adding capability to help Chevron achieve clean, safe and reliable operations.”



We pursue innovations that improve our environmental performance across our operations. This commitment to sustainability is built into the way we manage our work. Our Operational Excellence Management System establishes standards and objectives that extend from the corporate level to local management, allowing our businesses to focus on the localized risks and potential environmental issues at specific operating locations.

innovating to protect the environment in Australia

In 2019, we began operating our carbon dioxide injection system at the Gorgon natural gas facility on Barrow Island off the northwest coast of Western Australia. While standard industry practice for natural gas is to vent the separated CO₂ to the atmosphere, the Gorgon Project injects the reservoir CO₂ into the Dupuy Formation beneath Barrow Island. An ongoing monitoring program, including observation wells and seismic surveys, assists in managing the performance of the injected reservoir.

The project is one of the world’s largest integrated carbon capture and storage projects. Our plan is to inject up to 4 million tonnes of reservoir CO₂ each year, reducing greenhouse gas emissions from the Gorgon Project by approximately 40 percent.

4MM tonnes

of reservoir CO₂ planned for injection at our Gorgon natural gas facility each year

Above: Chevron technicians Ginny Ng (left) and Liam Fleay inspect equipment from the Gorgon Project used to inject and store CO₂ into the Dupuy Formation, a deep reservoir unit more than two kilometers under Barrow Island.



Above: The biodiversity plan for our Tengizchevroil joint venture includes debris removal in the Caspian Sea to protect endangered wildlife. This Caspian seal was entangled in an abandoned fishing net, rescued, provided care and released.

protecting marine life in the caspian sea

Ghost nets are lost, abandoned or discarded fishing nets that can be deadly to marine life. Our Tengizchevroil (TCO) joint venture identified removal of floating ghost net debris from the Caspian Sea as a key initiative in its biodiversity action plan. The 2017 debris removal pilot achieved impressive results, and due to its success, TCO collaborated with the government of Kazakhstan and two nongovernmental organizations (NGOs) to expand the program. As a result of these partnerships, 2,856 kg in nets and 6,496 kg in debris were collected in less than three weeks in 2019. Debris identified as suitable was recycled by incorporating it into cement and asphalt mixtures for road and pavement repair. Debris not suitable for recycling was disposed of by a licensed third-party waste contractor. TCO will continue working to increase awareness of the harm that ghost nets can do and encourage operators in the Caspian Sea to develop their own programs to protect marine life.



Eddie Emmert
Pipeline and Power
Operations Advisor

“I use technology to support Chevron’s operations at our wind farm and solar fields, deepening our understanding of solar solutions and reducing daily employee risk.”

partnering with renewable energy innovators in california

Chevron continues its commitment to increasing renewables in support of its business. In 2019, Chevron advanced its renewable power strategy in solar at our Lost Hills oil field in Kern County, California, where partnership and innovation are helping Chevron develop more energy at a lower carbon intensity.

Construction is underway on a project containing a 29-megawatt system of solar panels that will deliver low-carbon electricity to our Lost Hills operations. We agreed to purchase the solar energy from commercial solar provider SunPower under a power purchase agreement (PPA). SunPower built the project, which is scheduled for completion in 2020, on Chevron land.

Over the PPA’s 20-year potential term, the project is expected to produce more than 1.4 billion kilowatt-hours of solar energy and provide 80 percent of the power needs of Lost Hills oil field. When fully operational, it will be the largest solar electric system in California’s Net Energy Metering program.

80%

Upon completion, the solar project is expected to provide 80 percent of the power needs of the Lost Hills oil field.



Above: A Chevron project team reviews an installation of a solar array that helps to power our Lost Hills oil field in Kern County, California.

achieving operational goals while protecting the environment

Approximately 30,000 turtle hatchlings emerge from their Thevenard Island (TVI) nests during Australia's summer months, December through March, and traverse the beach to the ocean. The 2018 migration coincided with the TVI Onshore Plug and Abandonment Project, which involved decommissioning 15 onshore wells after the TVI oil fields and production facility reached the end of their economic life.

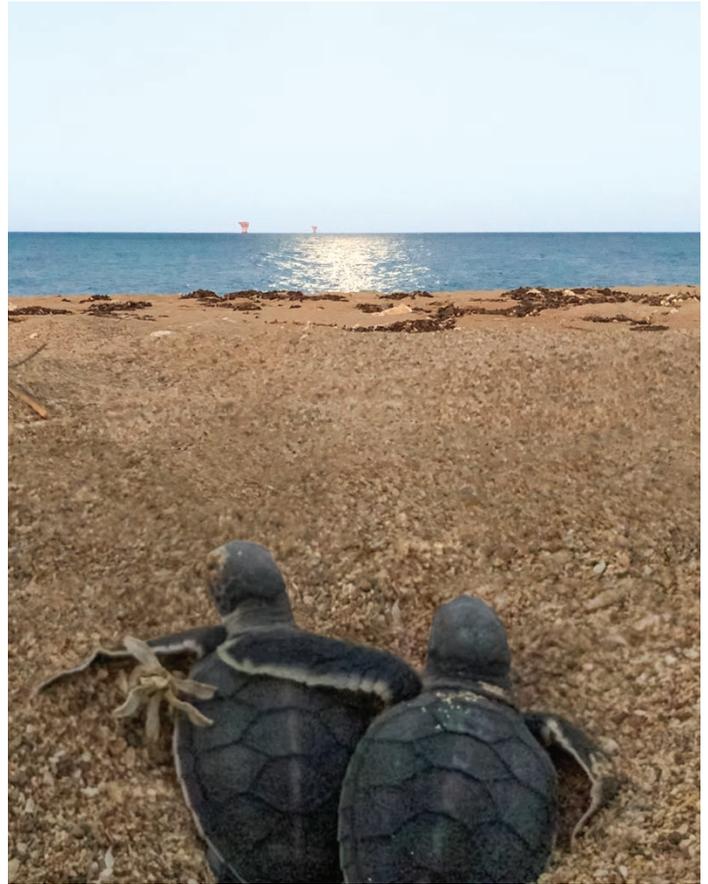
Three species of sea turtle inhabit the waters surrounding TVI, and all of them are sensitive to light. Several Australasia business unit (ABU) teams working together identified that the 24-hour well decommissioning cycle could pose a risk to the turtle behavior, as the lights associated with the rig could distract hatchlings from their seaward journey. The project was at risk for significant delay if the hatchlings could not be protected.

To protect the turtles while adhering to the administrative schedule, the ABU partnered with regulators and fauna handlers to implement risk mitigation strategies. Turtle fences were installed around well pads, regular lighting assessments to assess the efficacy of lighting controls were conducted, hatchling movements were monitored and temporary rig shutdowns occurred during high-risk periods to protect the turtles.

This quick response to the needs of the environment reduced risks to both the project and the turtles.

“The ‘one team’ effort protected the hatchlings during their journey, with more than 470 at-risk hatchlings relocated to safer beaches away from well decommissioning activities.”

— Blair Hardman
ABU Lead Environmental Specialist



Above: Chevron monitors green turtle hatchlings on Thevenard Island, Australia, as they journey from nest to ocean. We have measures in place to prevent the turtles from being disoriented by lights from onshore oil wells being decommissioned.

~30,000

turtle hatchlings protected on their beach-to-ocean journey on Thevenard Island



additional resources

[chevron.com/biodiversity](https://www.chevron.com/biodiversity)