

MolyCop swirls into Energy Savings - Northmore Gordon

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Certificates Our Environmental Attribute Certificate services help businesses accelerate technology adoption, improve project ROI, and manage claims of renewable energy, energy efficiency and carbon offset 1 carbon offset = 1 tonne of CO₂-e avoided or removed from the atmosphere. Avoided emissions covers activities that alter behaviour that would have otherwise caused emissions such as energy efficiency improvements or avoided deforestation. Removal covers activities that permanently remove CO₂ from the atmosphere such as new forestry plantations, soil carbon improvement or carbon capture and storage.

certificates Live Certificate Prices The value of certificates change day-to-day, check today's prices Solar VEECs (VEU PBA) VEU PBA for Large-scale Solar Measurement & Verification (VEU & ESS) M&V; for Large C&I; Efficiency Projects (VEU PBA & ESS PIAM&V;) BESS Calculator Estimate the Peak Reduction Certificate revenue available to your NSW battery project in minutes ERF & Carbon Credit Registration ACCUs for Emission Reduction Projects Boiler Upgrades (VEU & ESS) NSW & VIC Boiler Rebates REC Registration (I-RECs & LGCs) Register renewable assets for I-RECs and LGCs Trade RECs & Carbon with us Trade Local & International Environmental Attribute Certificates moREnewable100 (RECs & Offsets) Reach Global Sustainability Goals with Certificates and Offsets Deemed Certificates (VEU & ESS) NSW & VIC Rebates Global Certificates Environmental Attribute Certificates Australian Programs Australian EAC Programs Case Studies Sectors Articles Team More Close More Open More Northmore Gordon Learn more about Northmore Gordon with the latest news and insights, were to find us, and the extensive terminology used in emissions reductions About Us Who we are & what we do in energy efficiency & decarbonization. Locations Find our offices near you. Contact Us Get in touch with our team. Careers Join our team making a sustainability difference Articles Learn about energy efficiency & carbon reduction. Latest News Stay informed on industry developments. Government Updates Track policy changes impacting your energy use. Accreditations See our certifications for trusted service. Glossary Define key terms in emissions reduction. MolyCOP swirls into Energy Savings Case Studies February 17, 2021 Danielle O'Reilly The EAF Swirl Burner is the latest in a series of upgrades we have undertaken at our Waratah Site. Northmore Gordon is a long-term valued and trusted partner of Moly-cop. Over many years they have unlocked substantial funding from the Energy Savings Electricity or gas savings or both. programs which has assisted in continual improvements in production efficiency and helped to lower emissions from our operations. – Jeffrey Neave, Environmental Manager – MolyCOP The Client MolyCOP's Australian operations began as Commonwealth Steel Company (Comsteel) in Waratah, Newcastle in 1918 here it pioneered the Electric Arc Furnace steel-making with the first EAF in the southern hemisphere. MolyCOP produces steel grinding balls and train wheels at the Waratah site. Grinding balls are used in milling and regrind applications for mineral processing, extraction and other grinding applications. Key Facts Equipment Upgraded: Higher electrical efficiency through higher voltage used in the furnace Annual Energy Savings: Substantial reduction in CO₂-e emissions through the reduction of electricity Certificate Value: >\$500,000 Program: NSW Energy Savings Scheme (ESS) The NSW Energy Savings Scheme (ESS) provides financial incentives to install, improve or replace energy savings equipment and appliances in NSW households and businesses. The ESS was established in 2009. Financial incentives are in the form of tradeable certificates, called energy savings certificates (ESCs). Generally, householders and businesses who fund energy savings activities transfer the right to create ESCs to Accredited Certificate Providers (ACPs) in return for a discount on the cost of the energy savings activity. The MWh savings from the project determines the number of ESCs that can be created. The ESS works by allowing ACPs to create and register ESCs for energy savings that are supported with appropriate evidence. ESCs are then purchased each year by mainly electricity retailers operating in NSW to meet their share of a legislated annual energy savings target.) Method: Project Impact Assessment M&V; Wattly Partner: Northmore Gordon The Project The Electric Arc Furnace (EAF) was upgraded with a number of different energy conservation measures and improvements to the steel-making production. The EAF uses graphite carbon electrode rods to strike an electric arc and melt the scrap steel at the centre of the furnace whilst gas burners ensure the materials at the edge of the furnace remains in a molten state. By upgrading the furnace transformer to a higher voltage, a low current passed through the furnace resulting in higher efficiency as well as slower electrodes (consumption of the graphite rods). At the same time the gas burners were modified to from standard to swirl type with a higher temperature.

More energy was used from gas, but less from electricity resulting in a net reduction in CO₂-e emissions. Challenges Drastic increased cost of graphite electrodes led to researching how to reduce electrode consumption Reducing electrode current had the dual benefit of decreasing energy and electrode consumption The project included savings from both electricity and gas and showing the interactive effects from the Electric Arc Furnace as well as the Swirl Burners Additional Outcomes The new swirl burner design reduces the build-up of steel and slag on the furnace wall reducing maintenance, downtime and heat loss Our Role Wattly/Northmore Gordon is accredited under the NSW Energy Saving Scheme and ran the projects to claim Energy Saving Certificates (ESCs) on behalf of Moly-Cop. Northmore Gordon created the M&V; plan, collected site data & supporting evidence, built the baseline and operating energy models to calculate both savings from the two different energy conservation measures. Subsequently we wrote the M&V; report, then registered & sold the Energy Saving Certificates on behalf of Moly-Cop. A global leader in grinding media, mining chemicals, and rail consumables, supporting the mining and resources sector with innovative, sustainable solutions. Industry Manufacturing Location Newcastle, NSW Angela Clarke Principal Engineer Contact Angela > You may also like: Case Studies Turning a Regional Utility into an Active Energy Market Participant Case Studies Visy Gibson Island: 34,000 t CO₂-e Cut a Year With Waste-to-Energy Case Studies MainStream Aquaculture: \$19K Grant funds a heat pump electrification project Case Studies Kalafatis Fresh Produce: \$283K in Solar Certificates Case Studies Poultry Client Set to Hit 2030 & 2050 Carbon Emissions Targets Case Studies Greenham: Moving Towards Decarbonisation Get in touch Australia 1300 854 561 (Advisory) 1300 878 500 (Certificates) Melbourne Suite 1, Level 4 607 Bourke Street Melbourne VIC 3000 Singapore +65 6690 2480 Singapore 1 Keong Saik Road, Singapore 089109 Stay up to date Alternatively, complete the form and we will be in touch with you. First Name Last Name Email Phone Number Country Australia Singapore Subject Message Send Services Energy Audit Services M&V; Services EEO Assessments Corporate Energy and Carbon Management Grants and Program Strategic Energy Sourcing Virtual Energy Manager Climate Active Certification Sectors Animal Processing Chemical Processing Commercial Buildings Food & Beverage Manufacturing Mining Oil & Gas Pharmaceutical & Health Products Public Sector Waste & Wastewater Wood, Paper & Cardboard Processing Upgrades Boiler Upgrades Commercial Lighting Hot Water Systems Mid Scale Solar NABERS Public Lighting Refrigerated Display Cabinets Solar PV Small Scale UPS Certificates Live Certificate Prices International Renewable Energy Certificates Tradable Instrument for Global Renewables Australian Carbon Credit Units Energy Savings Certificates Large-scale Generation Certificates Small-scale Technology Certificates Victorian Energy Efficiency Certificates Government Schemes Emissions Reduction Fund Energy Savings Scheme Renewable Energy Target Victorian Energy Upgrades Helpful Links About us Meet the Team Careers Contact us Articles News Glossary Privacy Policy Complaints