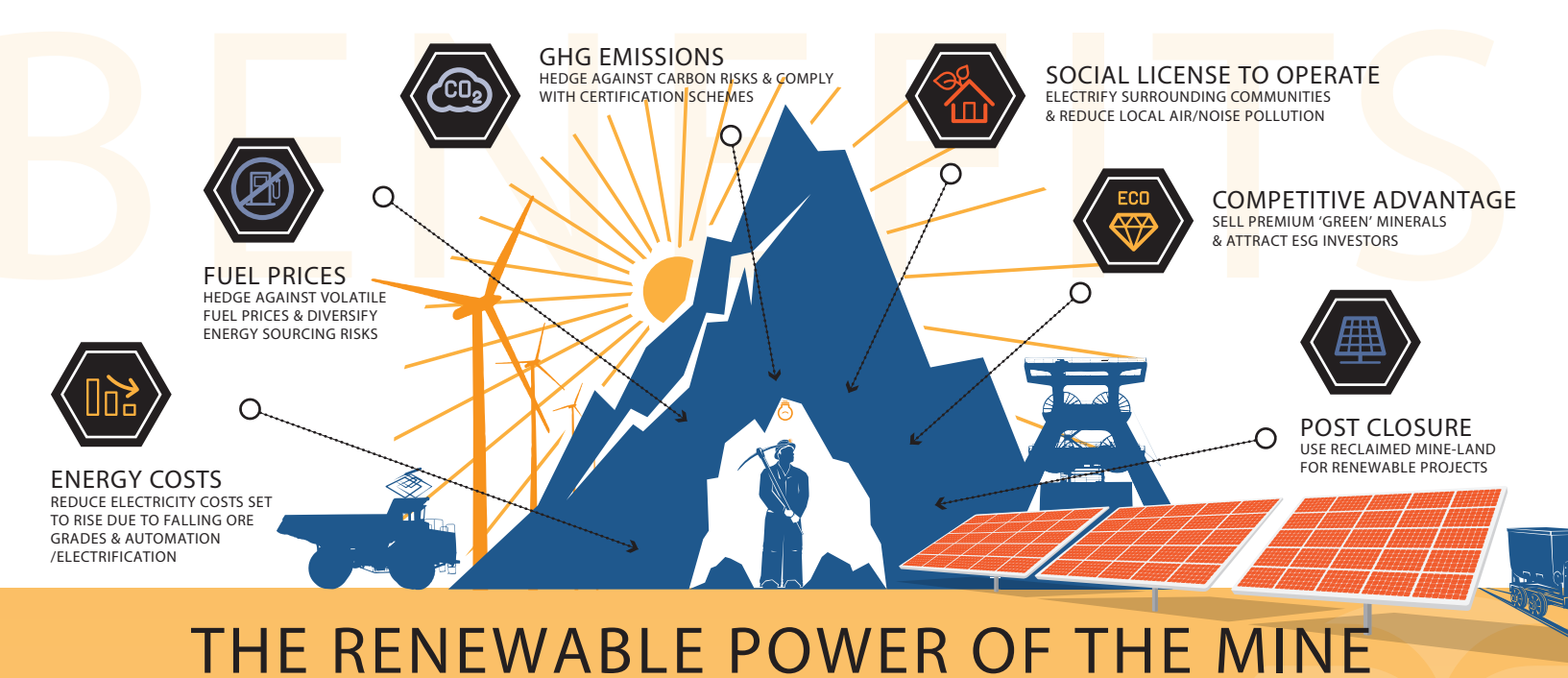


# THE RENEWABLE POWER OF THE MINE

## ACCELERATING RENEWABLE ENERGY INTEGRATION

| | TECHNICAL | EXPERTISE | FINANCING | REGULATORY | INTERESTS |
|---|---|---|---|---|---|
| ROADBLOCKS | • Intermittency vs low tolerance for power supply disruption<br>• Location constraints | • Inexperience<br>• Complexity<br>• Accountability | • Up-front capital costs<br>• Cost for IPPs<br>• Life of mine vs long off take time<br>• Donor support | • Fossil fuel subsidies/tax exemptions<br>• National utility monopoly<br>• Insufficient renewable regulations<br>• Limited incentives or obligations | • Vested interests<br>• Lack of corporate operational incentives |
| TRENDS & DRIVERS | • Electrification & automation<br>• Cost competitive<br>• Battery storage developement<br>• Other renewable/storage solutions<br>• Modular<br>• Blockchain | • Lessons learned from successful examples<br>• NGO & government initiatives<br>• Donor support | • Rapid growth of financing solutions<br>• Insurance products<br>• Falling capital costs | • Near tripling of renewable-specific regulations in last ten years<br>• Carbon pricing initiatives | • Institutional investors<br>• Consumers & government<br>• Affected communities<br>• Standards & certification |

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# THE RENEWABLE POWER OF THE MINE

## ACCELERATING RENEWABLE ENERGY INTEGRATION


## EXAMPLE MINES THAT HAVE INTEGRATED RENEWABLE ENERGY PROJECTS

### ESSAKANE GOLD MINE
SOLAR INTEGRATION

| | |
|---|---|
| Location: | Northeastern Burkina Faso |
| Grid Status: | Off-grid |
| Solar Project Size: | 15 MW |
| Solar Project Cost: | US$ 20 million |
| PPA: | 15 years |
| Diesel Savings: | 6 million liters annually |
| Carbon Savings: | 18,500 tonnes annually |

### DIAVIK DIAMOND MINE
WIND INTEGRATION

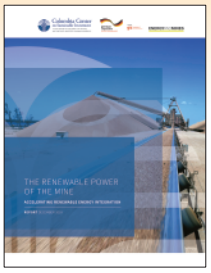
| | |
|---|---|
| Location: | Northwest Territories, Canada |
| Grid Status: | Off-grid |
| Wind Project Size: | 9.2 MW |
| Wind Project Cost: | US$ 33 million |
| Cost Savings: | US$ 5-6 million annually |
| Diesel Savings: | 5 million liters annually |
| Carbon Savings: | 12,000-14,000 tonnes annually |

### GABRIELA MISTRAL COPPER MINE
SOLAR/THERMAL HYBRID INTEGRATION

| | |
|---|---|
| Location: | Atacama, Chile |
| Grid Status: | On-grid |
| Thermal Size: | 34 MW |
| Solar Project Cost: | US$ 26 million |
| PPA: | 10 years |
| Diesel Savings: | 6.5 million liters annually |
| Carbon Savings: | 15,000 tonnes annually |

**The report provides an overview of how the mining sector has been integrating renewables in their mining operations, the bottlenecks that still exist, and the future trends that are likely to further drive the roll-out of renewables to supply electricity to mine sites. The recommendations have been divided up by the most important stakeholders that have a role to play in implementing the scale up of renewable power integration at mine sites – these include governments, mining companies, independent power producers and donors.**

**DOWNLOAD THE REPORT**

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