



RENEWABLE ENERGY ALCAN CABLE SOLUTIONS





Alcan Cable's Commitment: Cabling Solutions for Wind and Solar Farms

As the demand for electrical power continues to rise, the development of renewable sources of energy plays a critical role in meeting the energy needs of the future.

Wind and solar power are two important renewable energy sources for the generation of electrical power.

For over 100 years, Alcan Cable has been supplying electric utilities, Engineering, Procurement and Construction (EPC) firms and OEMs with high quality, innovative aluminum energy cables. We offer an array of aluminum power cables for transmission and distribution applications to support wind and solar energy sources. Our transmission conductors are the backbone of the North American energy grid.

Alcan Cable's aluminum energy cables are lightweight and flexible compared to copper cables, allowing for easier and faster installations in wind and solar applications. More importantly, the cost savings associated with converting to aluminum conductors allows our customers to significantly reduce their overall project costs.

As a top-ranked producer of aluminum energy cables, Alcan Cable delivers increased productivity, competitiveness, and profitability to our customers. Our industry-leading service, product quality and technical support enable us to meet or exceed our customers' requirements and expectations. With our cable plants geographically located across the United States, Canada and China, we are able to deliver cable products to meet your delivery requirements to ensure your projects are completed on schedule. Whether the energy source is solar or wind, Alcan Cable can provide an engineered cable solution to meet your needs.

Renewable Energy Cabling Solutions



Alcan Cable is committed to providing renewable energy product solutions for the US and Canadian markets. Our products can withstand the rigors of wind and solar installation environments.

1 Blades – Lightning Arrester System

STABILOY® XHHW-2, STABILOY® USE, NUAL® RW90 and NUAL® RWU90

2 Turbine

*NUAL® RW90 and *NUAL® RWU90

*For direct-drive turbines only.

3 Tower

2 kV Zephyr2000™, STABILOY® MC Cable

4 4 Tower to Step-Up Transformer, Combiner to AC-DC Inverter

Jacketed STABILOY® MC Cable, NUAL® ACWU, NUAL® RWU90, USE-2, USEI, STABILOY® SunPlus™ PV Cable, Zephyr2000™

5 5 To Grid

ACCC®, ACSS, ACSR

Alcan Cable: We Lead the Way

Quality

It's a fact. Alcan Cable tests every foot of every aluminum alloy conductor that it manufactures. Each single conductor and plexed assembly is wet test-tank verified for insulation integrity.

Value

At twice the ampacity per pound, not only is aluminum cable more cost-effective than copper, but the price of aluminum is much more stable than the price of copper. As every professional project manager knows – stable pricing means less risk.

Performance

The results of an independent Georgia Power study show that connections installed on AA-8030 aluminum alloy performed as well as or better than connections installed on copper conductors of equivalent ampacity in the current cycle submersion test.

These conductors perform in the harshest environments:

- Sunlight resistant
- Weather resistant
- Water resistant
- Oil resistant
- Heat/Cold resistant (+90°C to -40°C)

Ease-Of-Use

Alcan Cable's aluminum alloy is much easier to install than copper. For conductors of equal ampacity Alcan Cable's conductors are:

- Lightweight – weighs 50% less than copper
- Flexible – 25% more flexible than copper
- Less springback – 40% less springback than copper
- No additional maintenance – not necessary to periodically retighten connections

Sustainability

Alcan Cable products use hydro-aluminum which has a lower environmental footprint than copper. Copper conductors consume 100Gj/Tonne to produce and recycle. Alcan Cable's hydro-aluminum only requires 80Gj/Tonne for equivalent current capacity conductors. Another reason why Alcan Cable is the socially responsible choice.

Confidence

You can rest assured. If aluminum is the utility companies' preferred choice for carrying power all the way from the generator to the grid, it's the right choice for carrying power from a renewable energy source to the substation.

- Twice the ampacity of copper per pound
- Reliable termination
- Better insulation
- Lighter, more flexible, easier to install
- Specifically engineered for superior performance

Low Voltage Aluminum Alloy Power Cables — 600 V, 1000 V and 2000 V

High-quality AA-8030 aluminum alloy conductors feature a unique composition of metals that is specifically engineered for superior performance.

STABILOY® SunPlus™ PV Single conductor – 600 V, or 2 kV, 90°C wet or dry, (-40°C), VW-1, CT-rated, Sunlight Resistant, Direct Burial PV UL 4703 cable for wiring of grounded and ungrounded photovoltaic power systems described in NEC Article 690.

STABILOY® XHHW-2 feeder cable is used for residential, commercial, and industrial installations. This cable is also available with XHHW-2 conductors that are phase-identified, with three wide color-coded stripes for identification. In addition, it is used in cable trays (with “CT USE” marking) and messenger supported wiring applications. Single conductor insulated products are rated at 600 volts and comply with UL Standard 44.

STABILOY® USE-2/RHH/RHW-2 feeder cable is used for residential, commercial, and industrial construction, as well as in underground power distribution and network systems. It is also used in cable trays (with “CT USE” marking) and messenger supported wiring applications. Single conductor insulated products are rated at 600 volts and comply with UL Standards 44 and 854.

Zephyr2000™ Type RHH/RHW-2 2000 V aluminum conductors are used in special applications, such as wind and solar power generating facilities. Single conductor insulated products are rated at 2000 volts and comply with UL Standard 44.

NUAL® RWU90 in its most common construction carries a voltage rating of 1000 volts and complies to CSA standard C22.2 No. 38. This cable is suitable for direct burial in both wet and dry locations.

NUAL® TECK90 cable is a rugged, durable cable of versatile construction proven through many years of service in mines and major resource industries such as the pulp and paper, petrochemical and metal industries. TECK90 cables are approved for a wide variety of applications governed by the Canadian Electrical Code, Part I and complies to CSA Standard C22.2 No. 38 ACM alloy conductors.

NUAL® ACWU90 conductor is used for feeders and service entrances, as well as certain dedicated branch circuits in non-combustible buildings. These conductors are certified for outdoor and other wet applications, including direct burial in the earth.

STABILOY® MC Cable with Jacket is used for both aboveground and underground applications. This cable includes a PVC jacket and is listed for direct burial, for use in cable trays, and for wet locations. It is sunlight resistant and available in 600 V and 2 kV.

Bare Aluminum Transmission Cables

High-quality 1350-H19, HO and 6201-T81 alloys feature a unique composition of metals that is specifically engineered for superior performance.

ACCC® (Aluminum Conductor Composite Core) conductor’s ability to reduce line losses – by 30 to 40% – can provide significant reductions in fuel consumption and their associated emissions from fossil fuel sources or improve the overall efficiency and economic performance of renewable systems. Increased power delivery can also reduce the demand for new sources of energy.

Aluminum Conductor Steel Reinforced (ACSR) provides exceptional performance and reliability. With a wide range of stranding ratios and steel core strengths, Alcan Cable’s ACSR can be tailored to offer the right balance of strength and ampacity for your overhead power transmission and distribution projects.

Aluminum Conductor Steel Supported (ACSS) cable features HiTemp EC conductors that provide distinct advantages for certain transmission line applications, including the ability to operate continuously at temperatures up to 250°C with appropriate steel core coating (vs. 100°C for standard ACSR).



Our Value-Added Services

Alcan Cable’s value-added services move beyond our high-quality aluminum cables. By implementing one or more of our innovative service offerings, we can help you build new efficiencies into your supply chain and achieve cost savings. Our STAR® (Savings Through Alcan Recovery) program allows you to generate revenue by recycling cable remnants and reels. Alcan Cable was the pioneer in the “no reel” packaging arena with our MASTERPAK® concept. Through comprehensive engineering services, field technical support and fixed-forward pricing, we drive even more value into every cable we sell.

At Alcan Cable, our products have the quality you need, but it is our value-added services that deliver the confidence to know that you have a reliable partner to stand with you throughout every project.

Name of Project and Locations:

- **Erie Winds** – Port Burwell, Ontario
- **Baie des Sables** – Baie des Sables, Quebec
- **Tessara Solar** – Lorraine Roscoe, Texas
- **Big Moon** – Dexter, New Mexico
- **Crow Lake** – Crow Lake, South Dakota
- **Shirley Wind Farm** – Denmark, Wisconsin
- **Spearville** – Spearville, Kansas
- **Amhurstberg Solar Farm** – Amhurstberg, Ontario



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