

# Certifying CTC Global's Power Transmission Technology for Reduced CO<sub>2</sub> Emissions

Client: **CTC Global**

Industry: **Utilities**

Product: **ACCC<sup>®</sup> conductor**



*CTC considered both US-based and EU-based firms to provide the third-party validation. SCS Global Services emerged as our top choice due to its international reputation and exceptional client engagement*

*– Deependra Chaudhry,  
Associate, Strategic Projects  
at CTC Global*

## Executive Summary

CTC Global, provider to utilities and industrial companies worldwide, was seeking independent verification for reduced electrical transmission line losses and GHG emissions of its high-efficiency ACCC<sup>®</sup> conductor. CTC chose SCS Global Services, a leader in independent environmental assessments, to compare the line losses and emissions associated with ACCC<sup>®</sup> and conventional ACSR conductors. SCS found that the ACCC<sup>®</sup> conductor reduces CO<sub>2</sub> emissions from line losses by 27 to 31% under certain design conditions, validating the technology's potential to progress transmission efficiency, renewables penetration and build the clean energy grid.

## The Customer

CTC Global is the privately held developer and marketer of the ACCC<sup>®</sup> conductor and manufacturer of the hybrid composite core first commercialized in 2005. CTC Global serves utility and industrial companies around the world and has provided core used in nearly 450 projects representing over 40,000 kilometers of installed product. The finished ACCC conductor is manufactured by nearly two dozen certified manufacturing partners, worldwide. CTC Global Corporation is located in Irvine, California.

## The Need

"CTC Global was looking for a way to add our message and our contribution to the global climate agenda."

CTC makes advanced conductors that reduce line losses significantly and this translates into reduction in associated CO<sub>2</sub> emissions which can be applied towards carbon reduction goals of utilities, regulatory bodies or carbon offset projects.

**CTC GLOBAL**

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SERVICES  
Setting the standard for sustainability™ 

[www.SCSglobalServices.com](http://www.SCSglobalServices.com)



## The Solution

Under comparable conditions and using the ISO 14044:2006, an international standard governing environmental claims based in life cycle assessment, SCS calculated line losses and related GHG emissions for both conductors with CTC's Conductor Comparison Program (CCP) in 5 design scenarios based on actual CTC installations around the world.

SCS also independently reviewed the methods used in the CCP tool and validated its estimates within the range of applicable design scenarios.

## The Results

Assuming installations where ACCC® substitutes for ACSR lines of similar design characteristics and identical operating conditions, ambient conditions, and grid power generation mix, SCS certifies that:

- Use of the ACCC® technology in lieu of ACSR will reduce line losses and associated CO<sub>2</sub> emissions by 27-31% over the following range of parameters:
  - Line length: 20 to 60 miles
  - Diameter: 0.7 to 1.3 inches
  - Voltage: 110 to 400 kV
  - Peak operating amps: 650 to 2700 amps
- Use of the CCP tool is a reasonable way to estimate reductions in line losses and associated CO<sub>2</sub> emissions achieved by installing ACCC® in lieu of ACSR technologies

SCS confirms, and has no reason to doubt, that use of the ACCC® technology in lieu of ACSR will reduce line losses and associated CO<sub>2</sub> emissions in general settings.

## The Impact

With this certification, CTC Global will be able to:

- Strengthen marketing of the ACCC® technology to potential customers
- Effectively calculate the potential emissions reductions of projects
- Help customers with existing ACCC® projects make GHG emissions reductions claims and estimate the GHG benefit already achieved
- Provide reference for policymakers and regulators when drafting policies and legislation for utilities
- Inform carbon offset registries in developing scope and methods for awarding CO<sub>2</sub> emission reduction credits

[Read the full certification assessment report.](#)