



We help you design, deploy and maintain your HVDC projects

PSC was founded on delivering advanced HVDC projects, emerging as a premier HVDC world expert. We help you design, deploy and maintain your HVDC projects with our deep technical expertise in all areas of HVDC and its interfaces.

We are HVDC specialists

HVDC transmission presents owners, developers and operators with a unique set of advantages and some challenge. PSC is here to help you with expert advice and management in all areas of HVDC.

We conduct conceptual design, assist to obtain regulatory approval, help with connection agreements, perform CAPEX/OPEX analysis, maximize supplier engagement, offer procurement support and can provide technical specifications for HVDC converters and high voltage cable systems.

Over 25 years of specialist electricity experience has steered us to overcome any challenge you require assistance with. We are intimately familiar with the most current technology and are experts at intuitively adapting the right solutions to help you thrive. PSC advisors are deeply dedicated to our clients' success and have a long international history of aiding utilities in achieving their performance goals.

We deliver results

The distinctive nature of HVDC requires that you hire the best and brightest consultants. PSC senior engineers help you overcome the constraints that come with HVDC and make the most of the key opportunities that HVDC offers. We deliver world-class know-how and decades of hands-on experience to support your project with technical and commercial issues. With every project we successfully complete in countries around the globe, we bolster our experience, knowledge and practical tools. This equips you to overcome even your most challenging obstacles as efficiently as possible.

HVDC highlights

- We can immediately deploy our HVDC experts stationed in strategic locations around the globe for rapid response.
- We have a holistic understanding of all aspects of HVDC transmission opportunities and challenges.
- We are trusted HVDC specialists and thought leaders and we are internationally recognized as the best in our field.
- We have a wealth of hands-on practical experience with the full range of HVDC transmission tasks and demands with involvement in over half of all VSC HVDC projects worldwide.

Our capabilities

HVDC project development support

- Technical feasibility and conceptual design
- HVDC technology, equipment and main circuit configuration
- Technical due diligence of HVDC projects
- Preliminary front end engineering design (FEED)
- Support development of project budgets and risk management plans

System and engineering studies

- Power system software models of HVDC system and AC networks
- Power systems steady state dynamic and transient studies

O&M procedures and support

- O&M plans for staffing and support by contractors
- Fault tracing, root cause analysis, equipment failure reports
- Annual maintenance support for inspections and testing

- Technical support for ongoing CAPEX and major OPEX projects

EPC contract, construction and commission support

- Draft technical specifications for converter stations and cable systems
- Technical support to client legal team to draft and administer EPC contract
- Design documentation reviews
- Witness factory testing
- Installation inspections
- Commissioning support, subsystem, high voltage testing, transmission system testing
- Technical support during general warranty period to document claims for non-conformance

Project cost estimates

- Capital cost (Capex), O&M cost (Opex), ongoing Capex, asset retirement obligation (ARO)

How we help you

PSC understands the demands you are dealing with and that these are unprecedented times for the electricity industry. We are here for you, and we are passionate about making your job easier. Our in-depth insight and proficiency in all HVDC areas include extensive expertise in the design, project management, operation, installation, commissioning, and maintenance of HVDC transmission systems. We also offer Owner's Engineer technical services, including AC grid interfaces, converter station main circuit equipment, converter control and protection systems, auxiliary systems and high voltage cables.

Our people have very broad, objective technology expertise, including land and submarine cables and VSC and LCC HVDC technologies.

We also offer extensive expertise in key HVDC-related fields, including control systems, telecommunications, IT networks, market systems, site layouts, and high voltage transmission lines.

Outstanding people

The PSC team is based in Asia Pacific, Europe and North America, or wherever our client's needs take them. They are on-the-ground specialists with a shared passion and commitment to helping power a more sustainable world.

Proven reputation in HVDC

Our HVDC solutions are a flagship for PSC. Our reputation for excellence, in-depth technical know-how and practical, hands-on application, are all embodied in our superb team of world-leading HVDC experts.

PSC's HVDC projects are characterized by high demand for constantly evolving applications, leading edge developments in new technologies, and increasing reliability on lower loss interconnection of power networks, including remote and offshore renewable sources.

Individually and collectively, our PSC team has a combined project experience second to none, having an involvement in over half of all VSC HVDC projects worldwide.

PSC is the complete full-service provider of HVDC engineering services, bringing recent and relevant technology knowledge and expertise, coupled with pragmatic, hands-on implementation.



**Specialist Consultants
to the Electricity Industry**

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