Baker Hughes
Geothermal ORC Solutions

November 20, 2024

Executive Agenda

- Who we are
- Baker Hughes geothermal experience
- Baker Hughes geothermal solutions overview
- Focus on Geothermal ORC solutions

Baker Hughes

2023 highlights

PERFORMANCE

$30.5B
in orders

26%
increase in adjusted EBITDA*

$2.0B
in free cash flow*

TECHNOLOGY AND INNOVATION

$658M
in research and development

>2,000
patents granted

$750M
in new energy orders

ESG LEADERSHIP

AA
ESG rating by MSCI

28%
reduction in Scope 1 & 2 GHG emissions**

199
HSE perfect days

ABOUT BAKER HUGHES

~58,000
employees

$25.5B
in revenue

120+
countries where we conduct business

*Adjusted EBITDA and free cash flow are non-GAAP measures. Please refer to the Baker Hughes Reconciliation of GAAP to non-GAAP Financial Measures section at the end of this Annual Report.
** 2022 actual compared to 2019 base year.

Baker Hughes

Our 40+ years of Geothermal Expertise ensures success

Baker Hughes has worked in geothermal for **more than 40 years**, delivering subsurface and surface expertise

Planning, designing and executing well construction projects in extreme environments

- Our subsurface experts, located in nearly every geothermal region, offer a rich mix of skill in hot reservoirs, geomechanics, and reservoir chemistry, among others.
- Our technical team can determine the perfect technology fit for each application.

Surface production, both reliably conveying the heat transfer and producing power from it

Our experience as an original equipment manufacturer in power generation, plant management, control systems and condition monitoring – combined with our understanding of the subsurface – allows us to properly match the power-generating capacity to the subsurface resource.

Efficient operations that comply with environmental, social, and governance requirements

Our commitment to ESG means that we will do the right thing, always – giving you confidence in how the project is executed.

Baker Hughes Geothermal Experience

Baker Hughes

Baker Hughes **unique** capability to integrate subsurface and surface – **S2S**

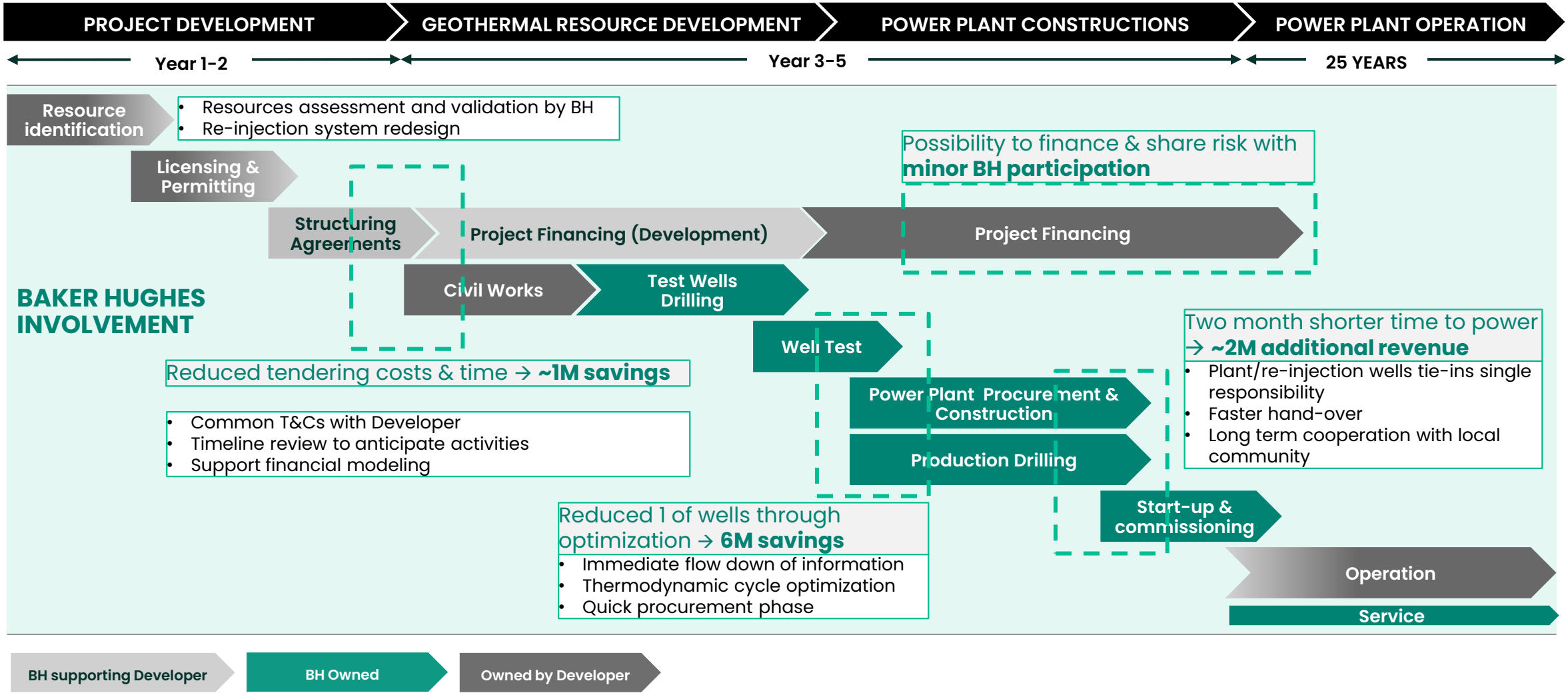
Front-end	Subsurface	Well construction	Steam field	Power generation	Heating solutions	EPC/rig partners
Feasibility analysis Concept engineering Field economics	Value assurance Advisory services Reservoir expertise	Subsurface and surface products and services Technology and commercial innovation Strong partnerships in services community				Integrated communication Early engagement Procurement

FINANCING • COMMERCIAL MODELS • DIGITAL ENABLEMENT

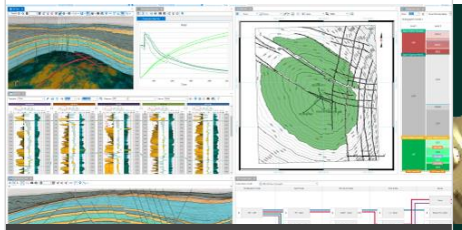
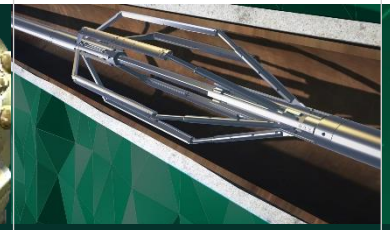
Reduces **risks**, overall **CAPEX** and **time** to commercial operation

S2S Value Prop - 10MW ORC Development Use Case

Costs, Time, Risks quantification



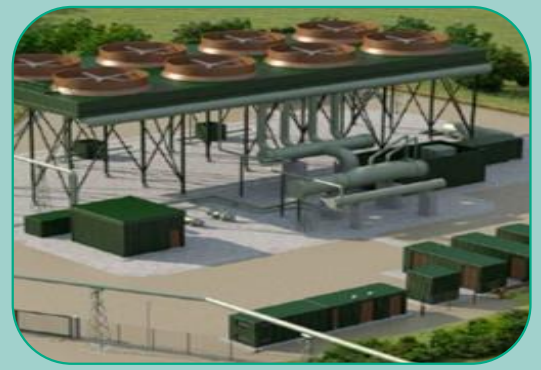
Comprehensive Subsurface-to-Surface Experience

DESIGN AND SOFTWARE SERVICES	SUBSURFACE SYSTEMS			SURFACE SYSTEMS	
					
RESERVOIR MODELING	**WELL CONSTRUCTION**	**EVALUATION & MONITORING**	**COMPLETION & PRODUCTION**	**EQUIPMENT**	**PLANT ENGINEERING & MONITORING**
JewelSuite™ subsurface modeling JewelSuite geomechanics JewelSuite reservoir modeling Connection to simulation engines	Drill bits Drilling services Drilling & completion fluids Cementing	Wireline services Coring Wellbore monitoring Integrated reservoir characterization	Completions & well intervention Hydraulic fracturing/stimulation Artificial lift Specialty chemicals	Surface trees Wellhead systems Flow control Field service	Steam turbines ORC / binary cycle Electric generators (BRUSH) Brine pumps Valves (Masoneilan) NCG compressors Digital solutions Micro-seismic & fiber-optic monitoring

Baker Hughes Geothermal Surface Solutions Overview

Steam turbines

5-80MW, single and double flow, STG+condenser as typical scope of supply



Binary/ORC plants

5-65MW, single or double pressure level design, air or water cooled, E&P as typical scope of supply

NGC extraction system

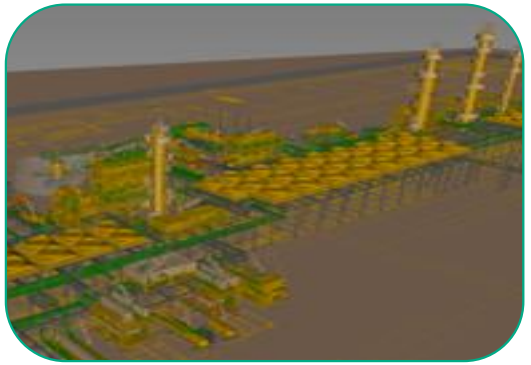
up to 20MW, integrally geared compressor up to 4 stages, from 0.06bar suction pressure

NCG reinjection system

up to 5MW, reciprocating compressor suitable for CO_2 & H_2S (lethal gas) service, up to 100bar delivery pressure

Surface and Electrical Submergible pumps

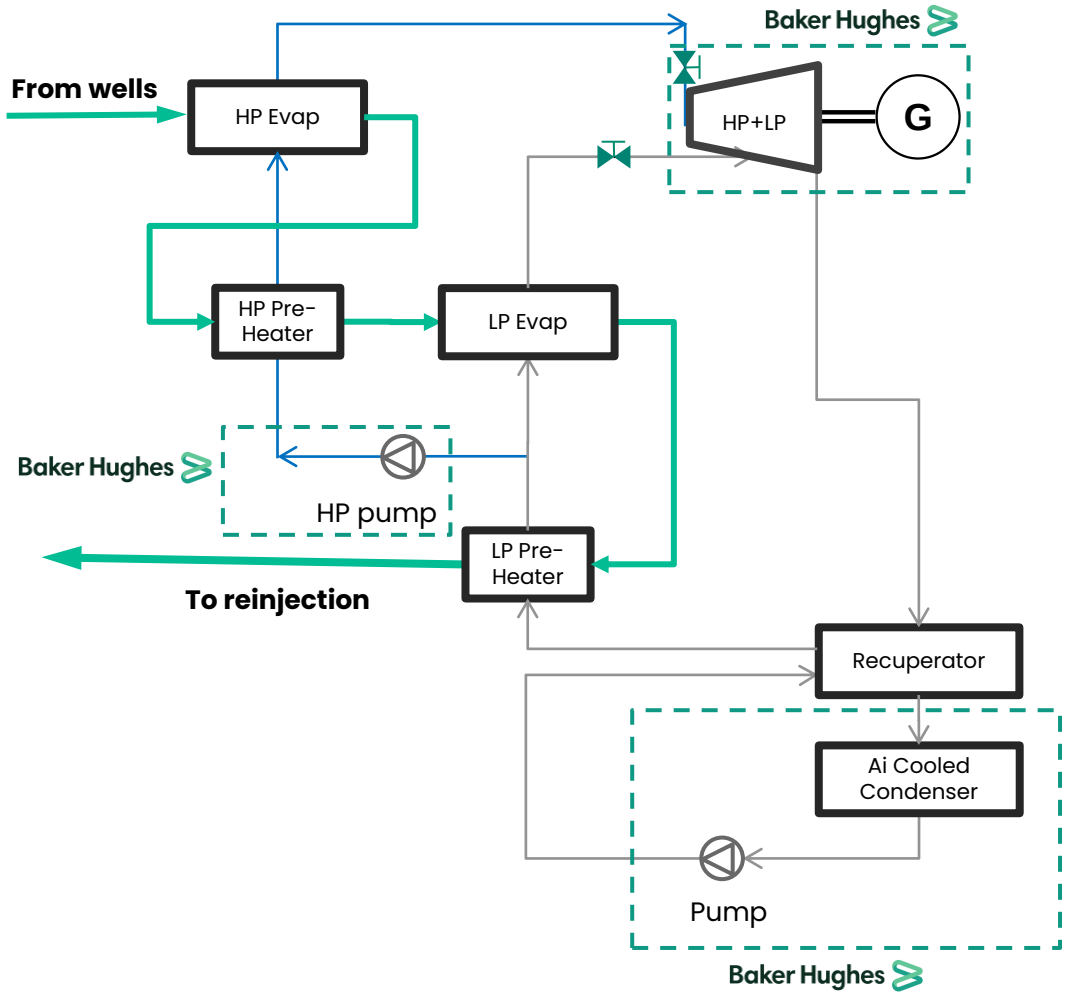
suitable for aggressive geothermal fluids,



EPC turnkey capability for Power Plant with local partners

Geothermal ORC Solutions for EGS

- **High capacity 5-65MW** flexible plant(s) configuration
- **High efficiency** thanks to customized single or multi-pressure design
- **Full integration** with subsurface facilities (including extraction and injection pumps/compressors)
- **Core In-house technology:** Turbo-Generator, Air Cooled Condenser, Control System, Working Fluid & Brine Pumps, NCG compressors
- **Global** service footprint, **flexible service strategy** (Regular/Predictive Maintenance, CSAs)
- **Flexible scope of supply**, based on Project requirements: EPS, EPC, EPC+F (with Partners)



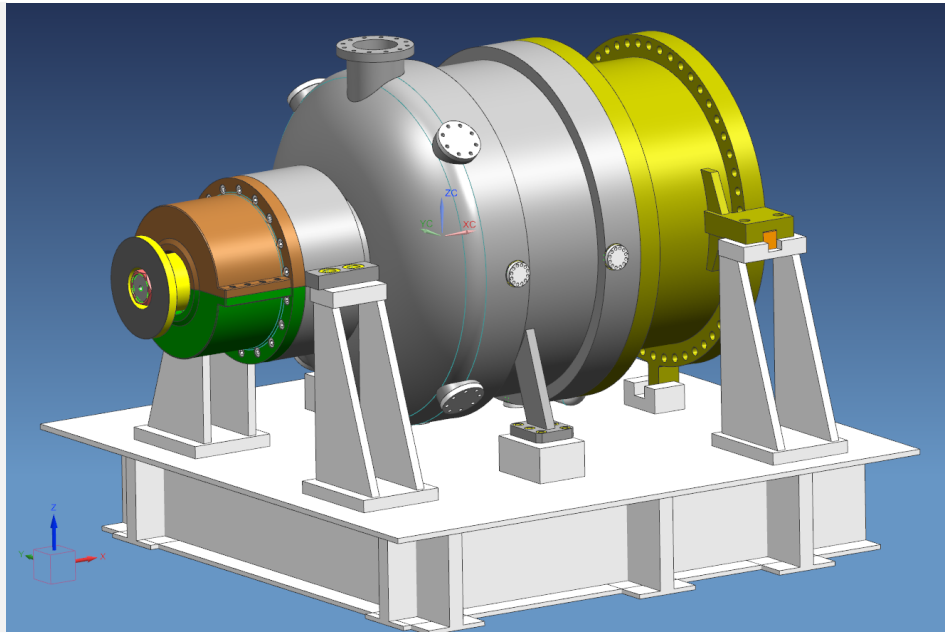
Reference 2 pressure levels configuration with side-stream turbine

ORC Axial Turbine Design Overview

- Flexible architecture: multistage **overhung** and **between bearings**
- **2-Pressure levels** on a **single turbine** with **side-stream design**
- **High efficiency:** up to **92%+**, with **9+ stages**
- **High turbogenerator train capacity:**

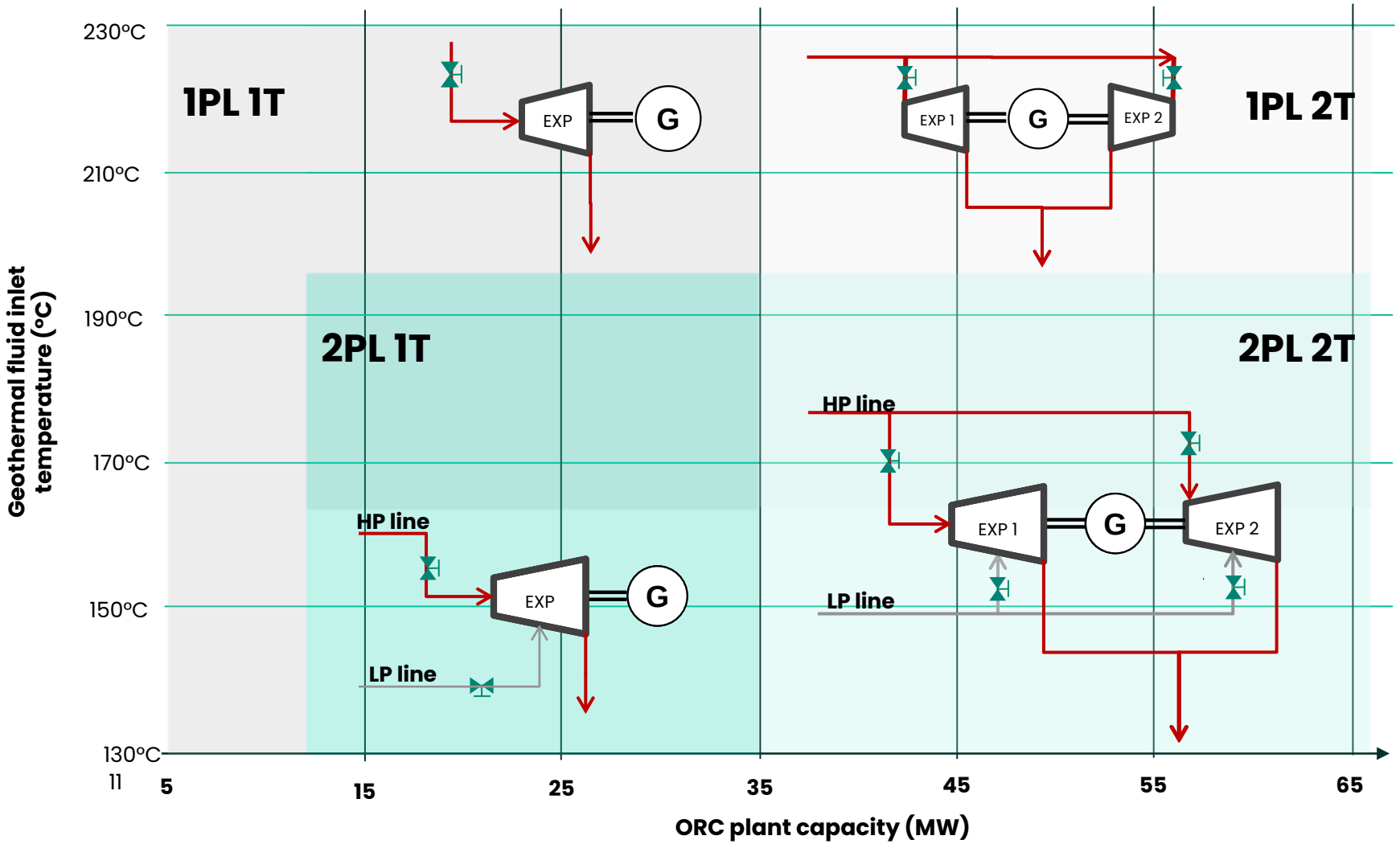
Up to 65MW @1800rpm with direct drive 4 poles generator

65+MW with direct drive or gearbox & 2 poles generator @3600rpm



Ref SGC4-26 steam turbine

Plant and Turboexpander Configuration Map



Legend:

1. **1PL 1T** – 1 Pressure Level cycle, 1 Turbine
2. **1PL 2T** – 1 Pressure Level cycle, 2 Turbine on single generator (double-ended)
3. **2PL 1T** – 2 Pressure Levels cycle, 1 Turbine with side-stream
4. **2PL 2T** – 2 Pressure Levels cycle, 2 Turbine with side-stream on single generator (double-ended)

Main References

Power Station

(Brunei)

- **Application:** WHR from 4 x LM2500
- **BH scope:** overall plant engineering, main equipment supply, construction management
- **COD:** 2018
- **Gross/net output:** 16 MW / 14 MW
- **Net Plant Efficiency**@28°C: 20.5%

Compressor Station

- **Application:** WHR from 3 x PGT25+
- **BH scope:** overall plant engineering, main equipment supply, supervision on BH scope
- **COD:** 2015
- **Gross/net output:** 15 MW / 13.5 MW
- **Net Plant Efficiency**@5°C: 21.5%

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