Air-Cooled Binary Power Plant

Air-Cooled Binary Geothermal Power Plant
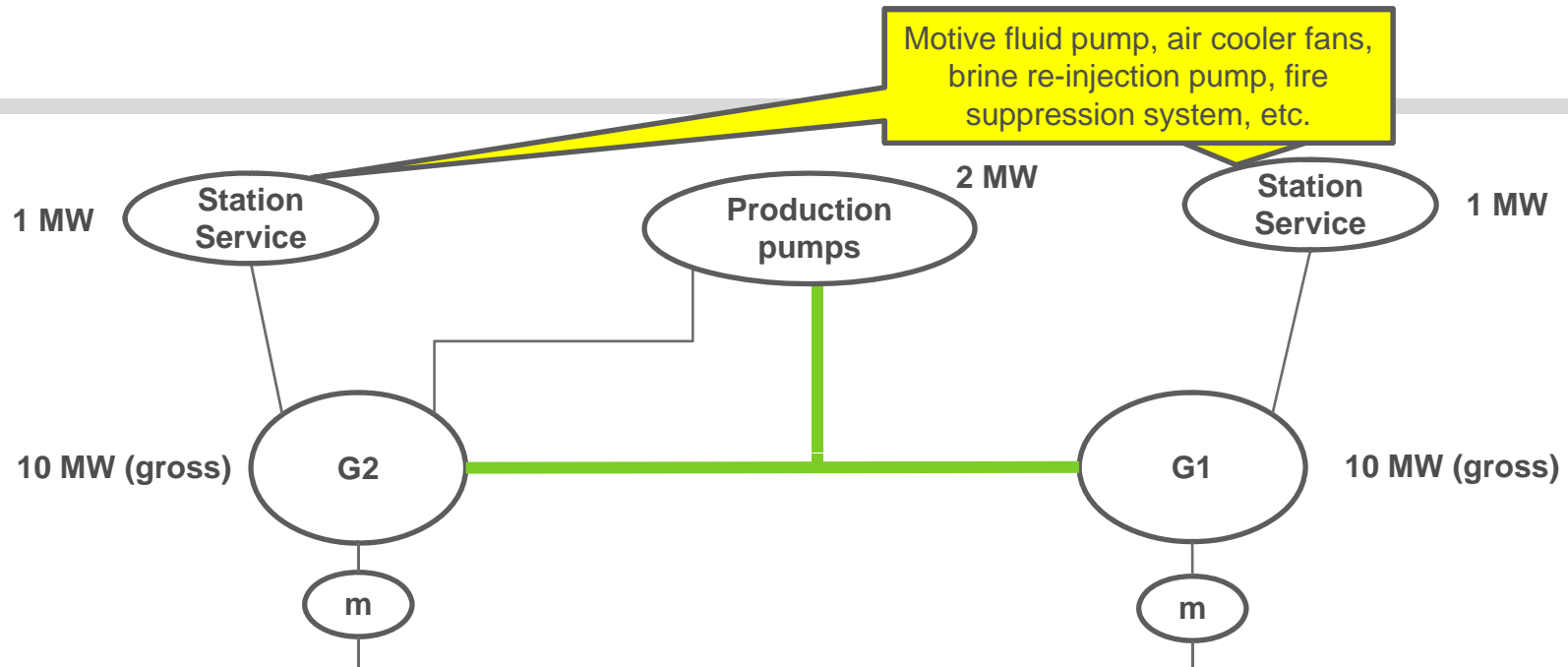
Condenser

Fan

Turbine

Generator

Vaporizer

Preheater

Motive Fluid Pump

Injection Pump

Geothermal Fluid
Motive Fluid (Liquid)
Motive Fluid (Vapor)

Production Well

Injection Well

Hot Geothermal Fluid

Production Pump

Cooled Geothermal Fluid

0

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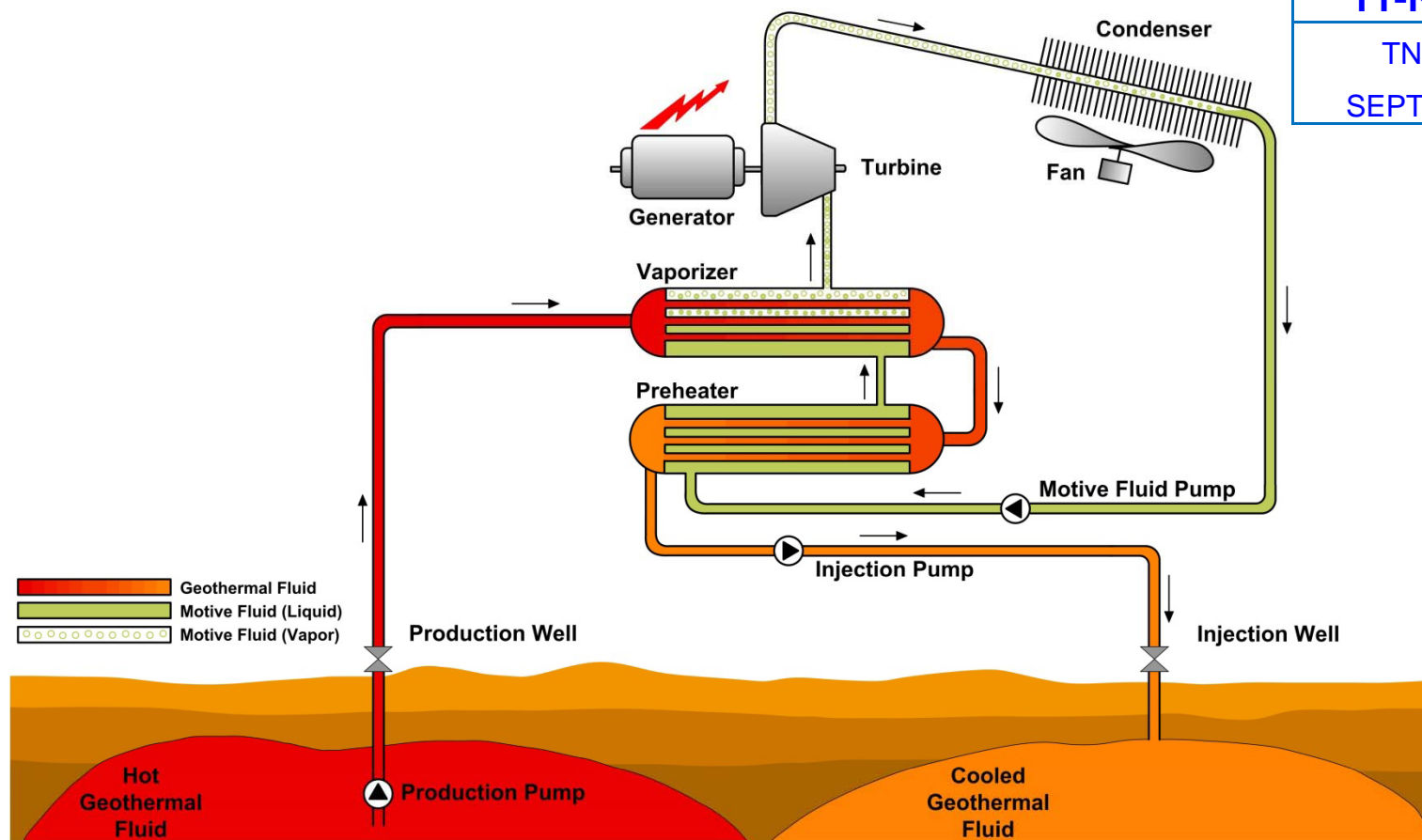
Typical Binary Geothermal Complex

Motive fluid pump, air cooler fans, brine re-injection pump, fire suppression system, etc.

1 MW — Station Service

Production pumps

2 MW

Station Service — 1 MW

10 MW (gross) — G2

G1 — 10 MW (gross)

m

m

	G1	G2	Total
Gross generation	10 MW	10 MW	20 MW
Metered net generation	10-1= 9 MW	10-1-2 = 7 MW	16 MW
Theoretic adjusted meter to reflect pro-rata share of production pump load	10-1-1= 8 MW	10-1-1= 8 MW	16 MW
De-facto case under WREGIS Advice Letter	10-1-1=8 MW	10-1-2=7 MW	**15 MW**

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The Fundamental Challenges

- CAISO does not support real-time meter adjustments via external communication
  - e.g. to adjust the G1 and G2 meters to allow real-time netting out of each plant's share of the production load
- Any after-the-fact adjustment of WREGIS reporting will create discrepancies between energy delivered and RECs generated
  - Will violate California's rules for RPS Portfolio Content Category 1 (=bundled energy and REC)

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