

GEOLAC

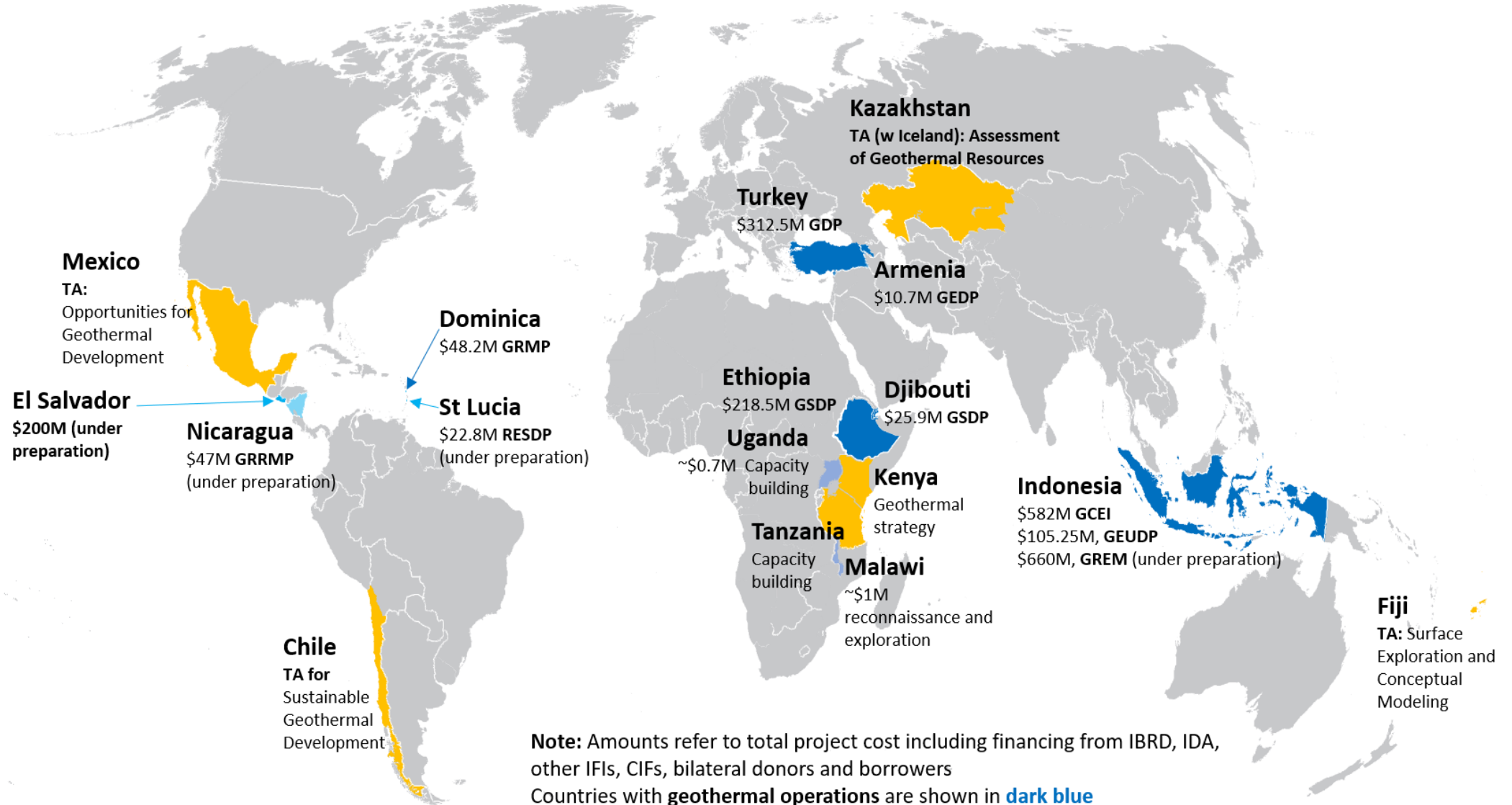
USING CLIMATE FINANCE FOR GEOTHERMAL DEVELOPMENT

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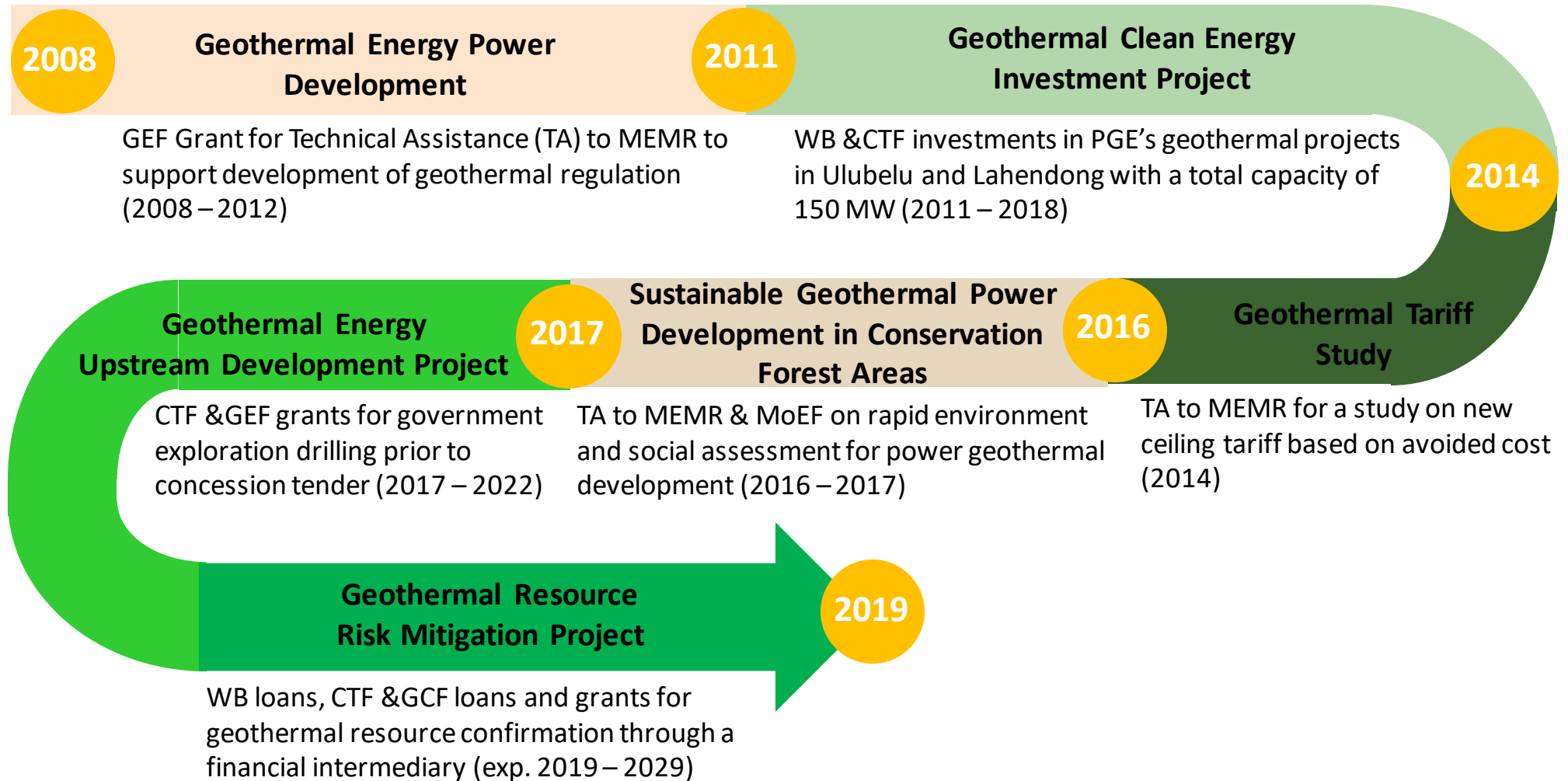


WORLD BANK GEOTHERMAL ACTIVITIES



Note: Amounts refer to total project cost including financing from IBRD, IDA, other IFIs, CIFs, bilateral donors and borrowers
 Countries with **geothermal operations** are shown in **dark blue**
 Countries with **geothermal projects under preparation** are shown in **light blue**
 Countries with **TA engagement in FY18** are shown in **orange**

WORLD BANK ENGAGEMENT IN INDONESIA



WORLD BANK ENGAGEMENT IN INDONESIA

DOWNSTREAM

GEOTHERMAL CLEAN ENERGY INVESTMENT PROJECT (completed)

- \$300m investment
- Steam-field and power plant development for 2x55MW in Ulubelu and 2x20MW in Lahendong
- Potential avoidance of ~1.1 million CO2 p.a. compared to coal-fired generation

UPSTREAM

GEOTHERMAL ENERGY UPSTREAM DEVELOPMENT PROJECT (under implementation)

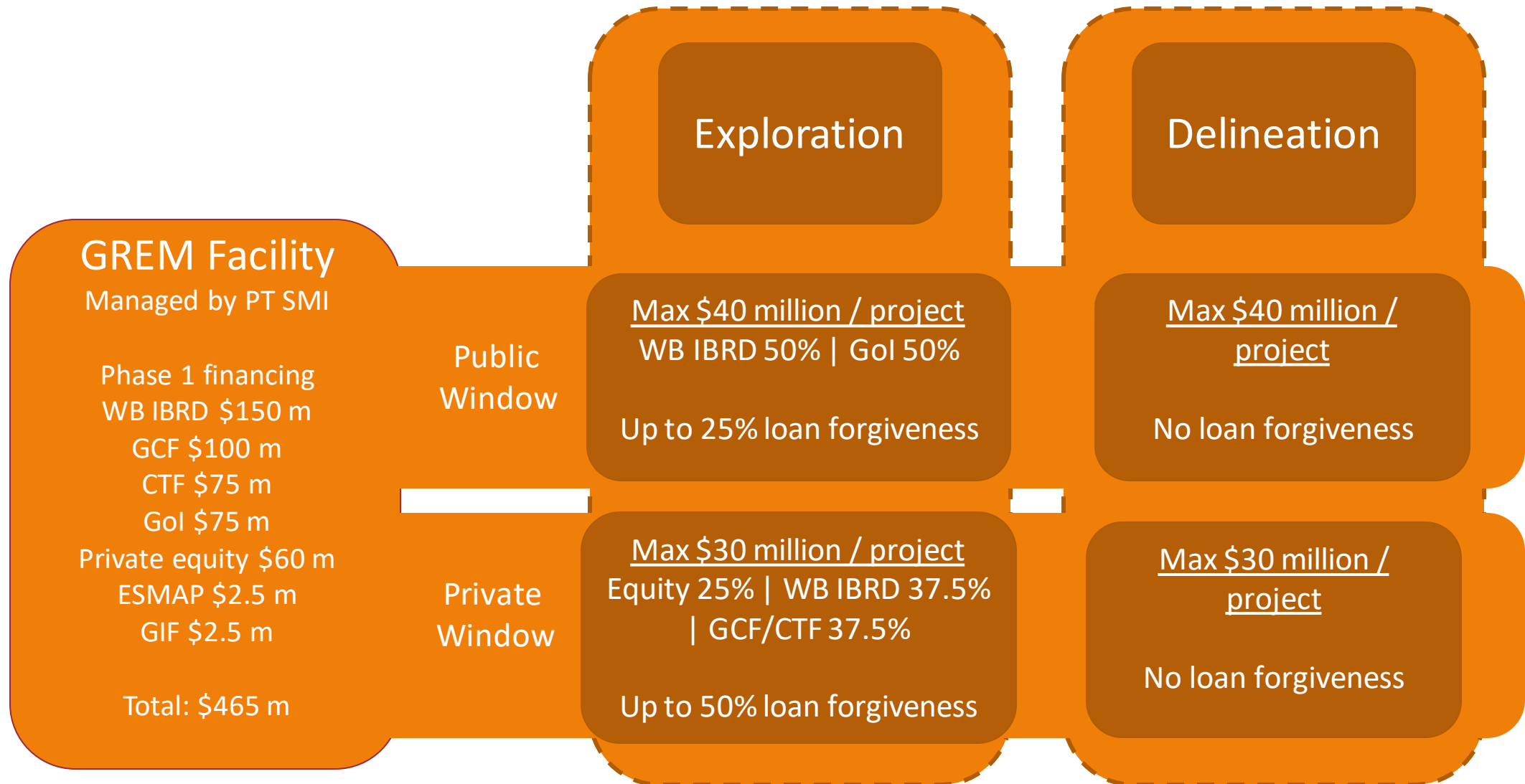
- \$54.25m grant
- Exploration drilling by government to confirm resources up to 65 MW prior to concession tender
- Capacity building on tariff setting methodology & tendering

UPSTREAM

GEOTHERMAL RESOURCE RISK MITIGATION PROJECT (under appraisal)

- \$840m investment
- Resource confirmation for up to 16 greenfield projects
- Expected leverage of \$4b commercial finance and adding 1 GW of geothermal capacity by 2030.

INDONESIA: LEVERAGING PUBLIC AND PRIVATE FINANCE THROUGH RISK SHARING



USE OF REIMBURSABLE GRANT FOR RISK MITIGATION

- Under GREM, 50% of support to private developer will be given as an innovative equity-linked debt instrument, up to a maximum of \$15m. This will provide debt financing for the Developer SPV.
- The general principle is that if exploration is successful, the debt instrument will be paid back in full, plus a success fee; if unsuccessful, it can be 100% forgiven.
- The amount to pay back for the debt instrument will be linked to the Developer SPV through a mechanism to determine the fair market value of the SPV post-exploration.
- The fair market value will be determined by a pre-set formula with the only variable being: (i) steam capacity, (ii) enthalpy and (iii) expected cost per well.

TURKEY: RISK SHARING BASED ON WELL PRODUCTIVITY

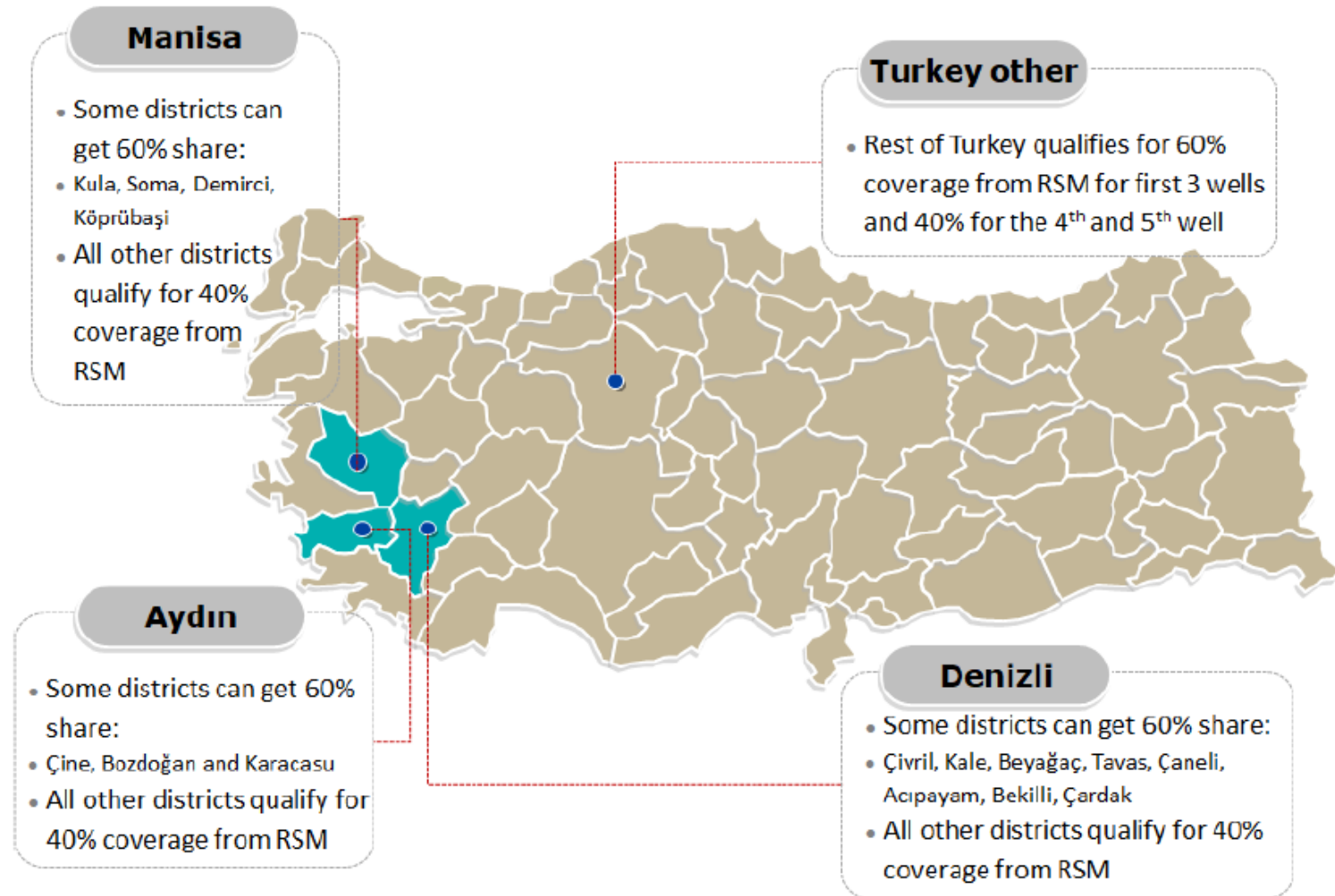
Wells covered: Up to 3 initially, with an option for a total of 5

Compensation: 40% or 60% of acceptable well costs of unsuccessful wells depending on regions: higher coverage in less explored areas of Turkey.

Success Fee: 10% of acceptable well costs for successful wells

Maximum payout: \$4 million per project

Success criteria: Project-specific, based on pre-agreed well productivity criteria (temperature, flowrate)





THANK YOU

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