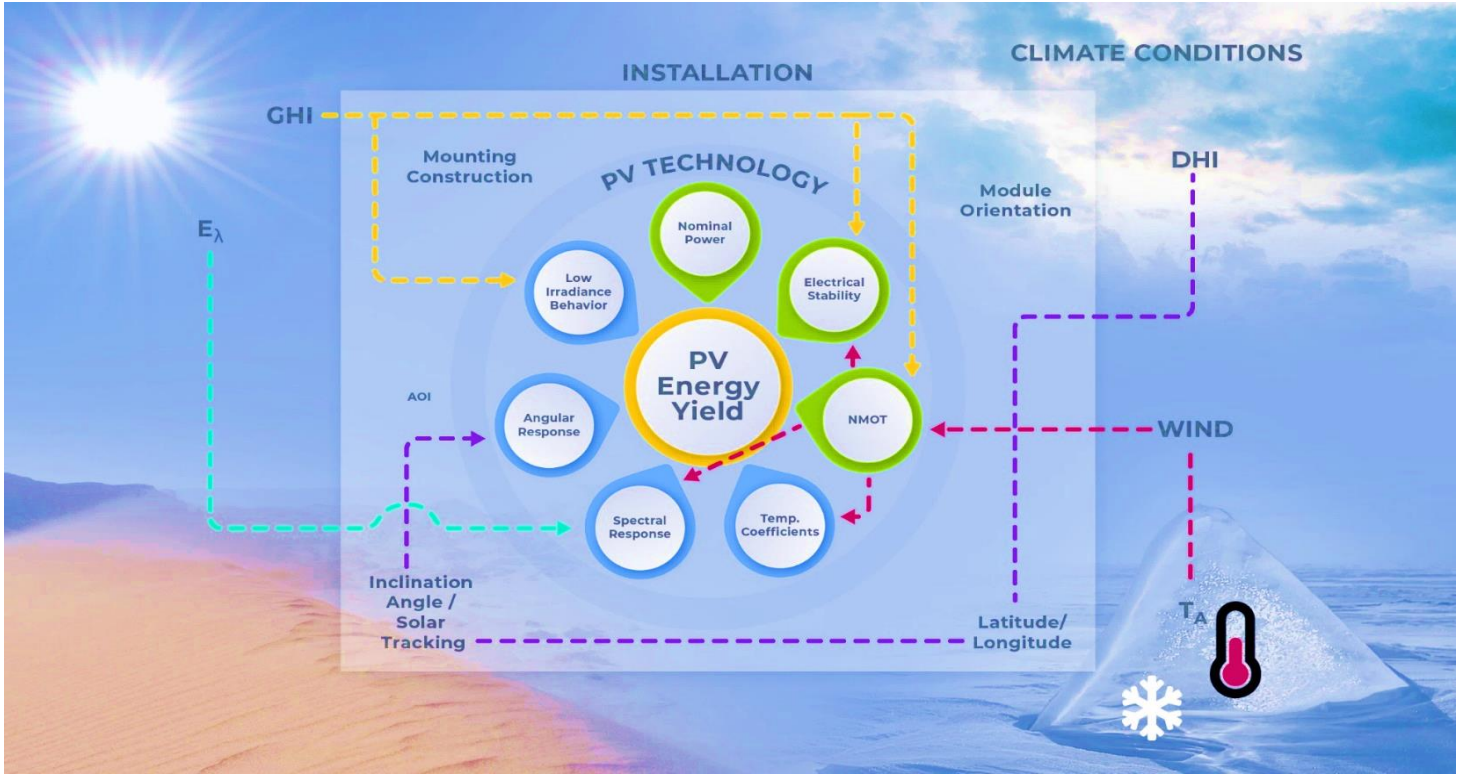
Climatic Rating of Photovoltaic Modules

Different Technologies for Various Operating Conditions



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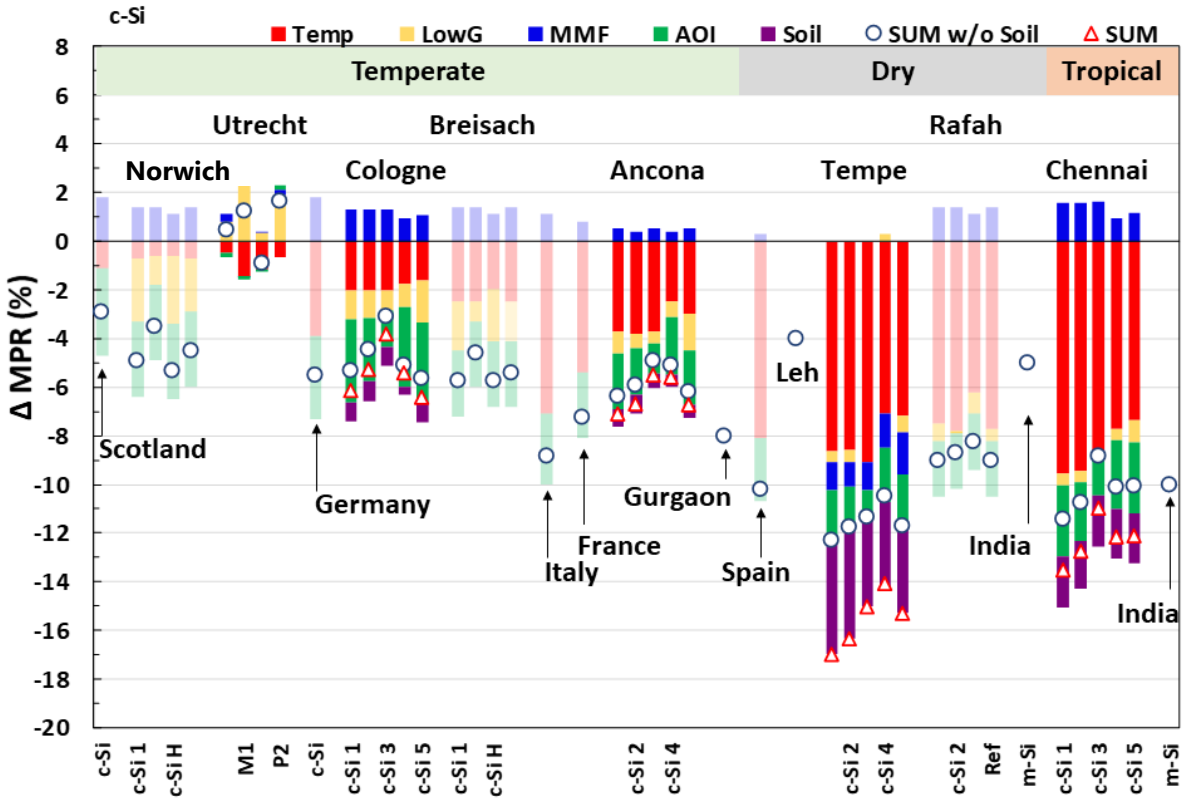
Climatic Rating of Photovoltaic Modules



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Module Performance Ratio

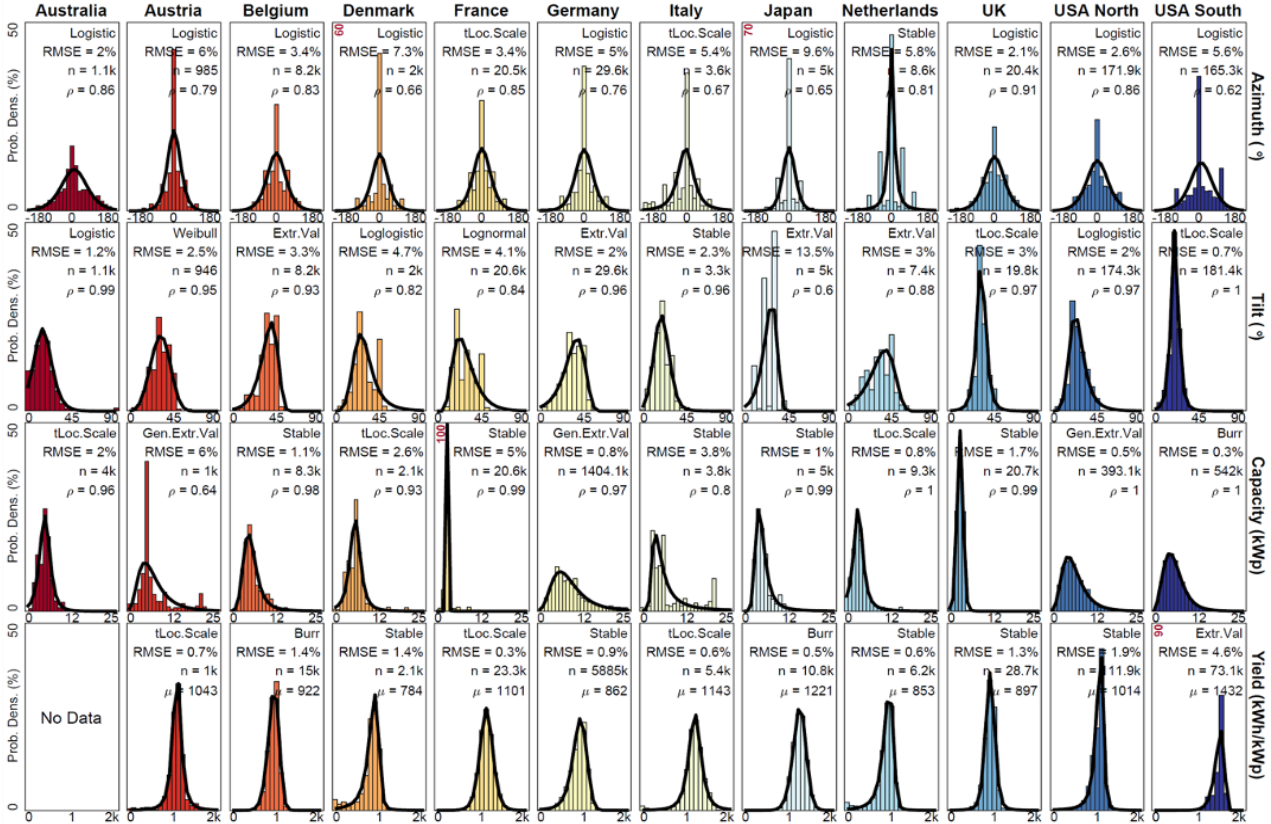
MPR depends on:

- Temperature (**Temp**)
- Low irradiance (**LowG**)
- Mismatch factor (**MMF**)
- Angle of Incidence (**AOI**)
- Soiling (**Soil**)

MPR provides:

- a realistic estimate of the performance of a PV specific technology at various climate conditions
- estimates of various PV technologies at a specific climate zone.

Climatic Rating of Photovoltaic Systems



PV Systems <25 kWp:

- Azimuth
- Tilt
- Capacity [kWp]
- Yield [kWh/kWp]

For each PV system:

- Energy yield can be simulated using appropriate models, geographic location & meteorological data.

PVPS

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Climatic Rating of Photovoltaic Modules

- The IEC Standard series 61853 "Photovoltaic (PV) module performance testing and energy rating" (Part 1 to 4) provides a methodology to obtain a simple but realistic estimate of the performance of a PV module in different climatic conditions.
- The Climate Specific Energy Rating (CSER) is equivalent to the performance ratio of the PV module for a complete year and allows to compare the performance of different PV technologies or modules under real working conditions.
- The search for higher efficiencies of PV modules and lower LCOEs in the PV industry, has made that the concept of energy instead of power is becoming more and more important and with this, the development of new and better energy rating methods has started on a promising path.