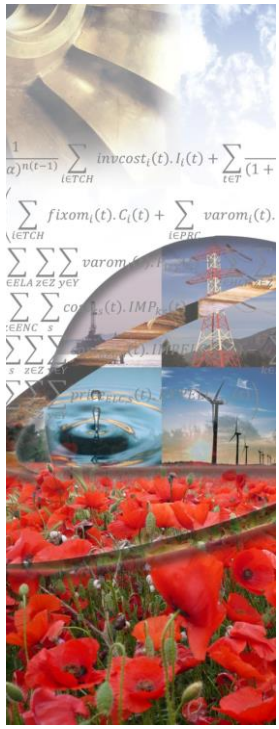

Renewables and future power systems: CMA's topics of interest for the ETSAP-IRENA session

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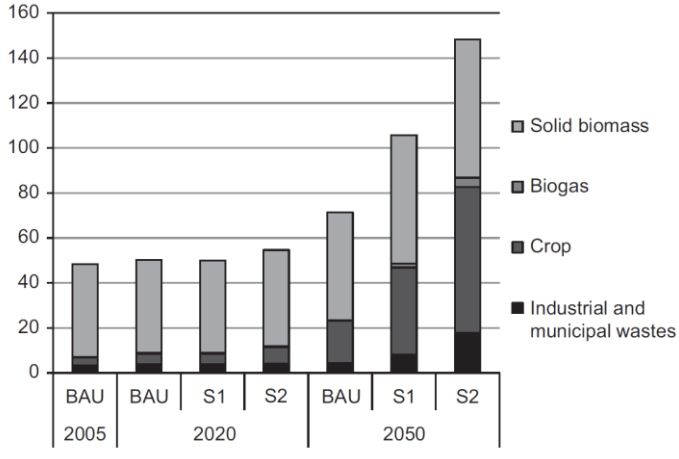
ETSAP IRENA REMAP Session:
June 2013

Models for renewables and power systems analysis

- Global: ETSAP-TIAM / TIAM-FR
- French Times model
- Réunion island electric system model

Global models: renewable scenarios

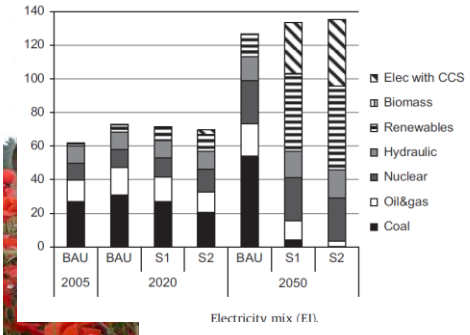
- 1. Focus on the role of biomass and CCS



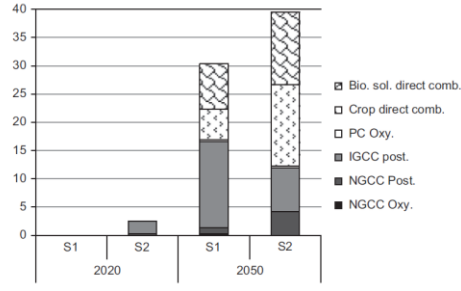
World biomass consumption (EJ).

Global models: renewable scenarios

- 1. Focus on the role of biomass and CCS



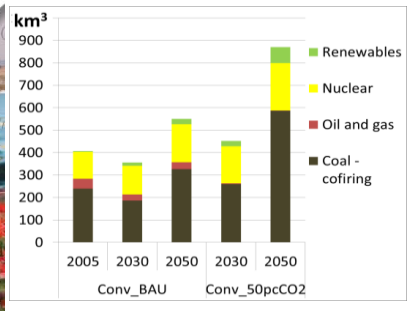
Electricity mix (EJ).



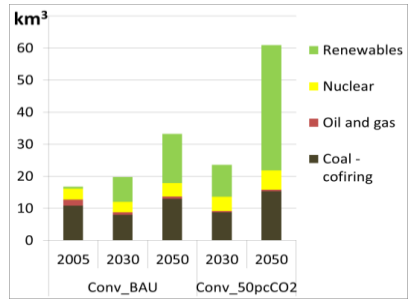
CCS deployment in the power sector (EJ).

Global models: renewable scenarios

- 2. Impact on water consumption and withdrawals



Water withdrawals

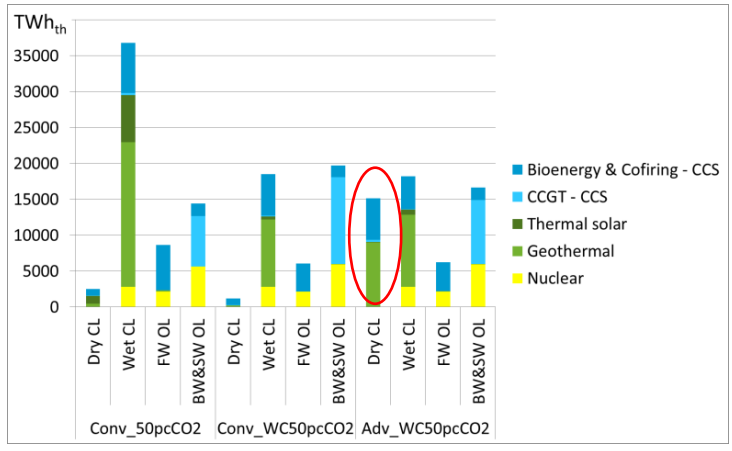


Water consumption

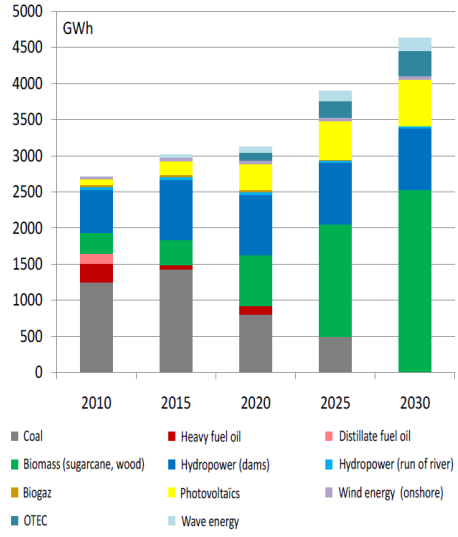
More CCS, more geothermal, more thermal solar … more water needs

Global models: renewable scenarios

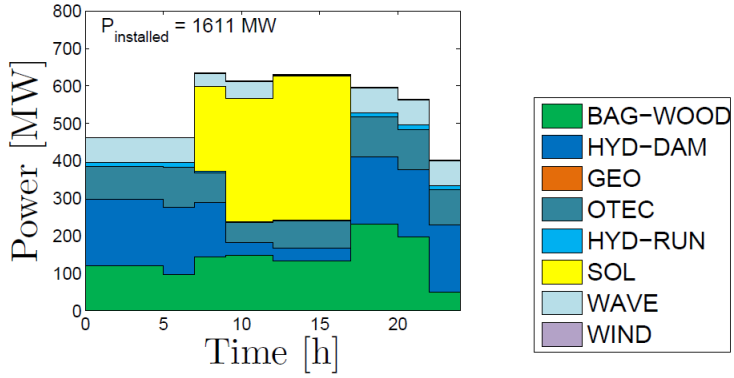
- 2. water consumption and withdrawals



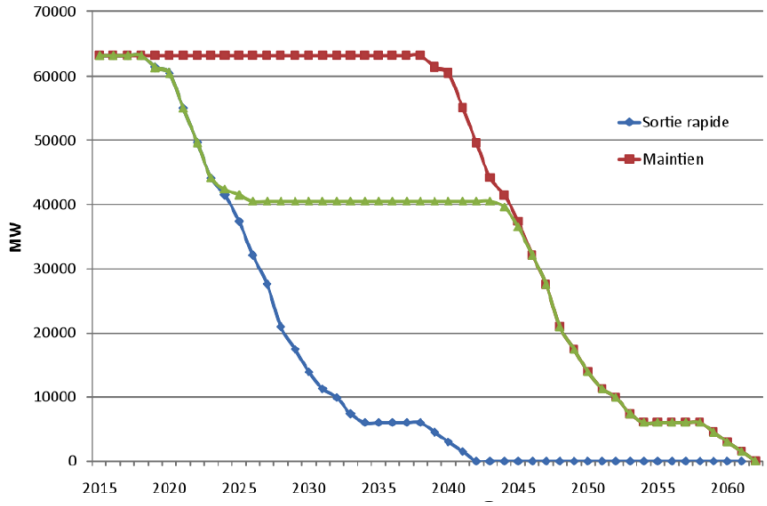
100% renewables and reliability: the Reunion island case



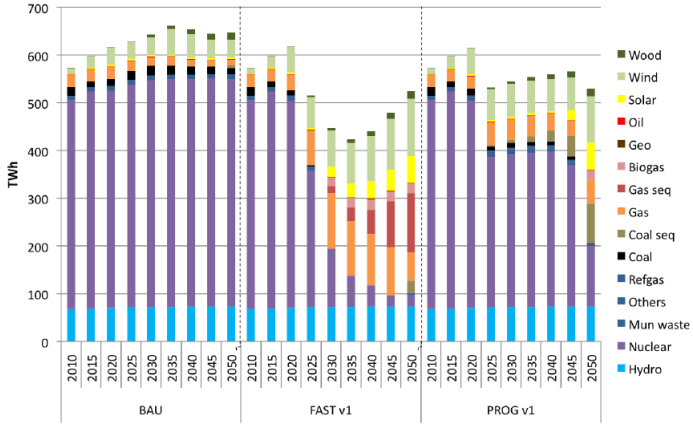
100% renewables in the Reunion island: typical day power mix



Renewable and nuclear: trade off in France



Renewable and nuclear: trade off in France



PROGv1: 28% ren in 2030, 50% in 2050

FASTv1: 43% ren in 2030, 55% in 2050