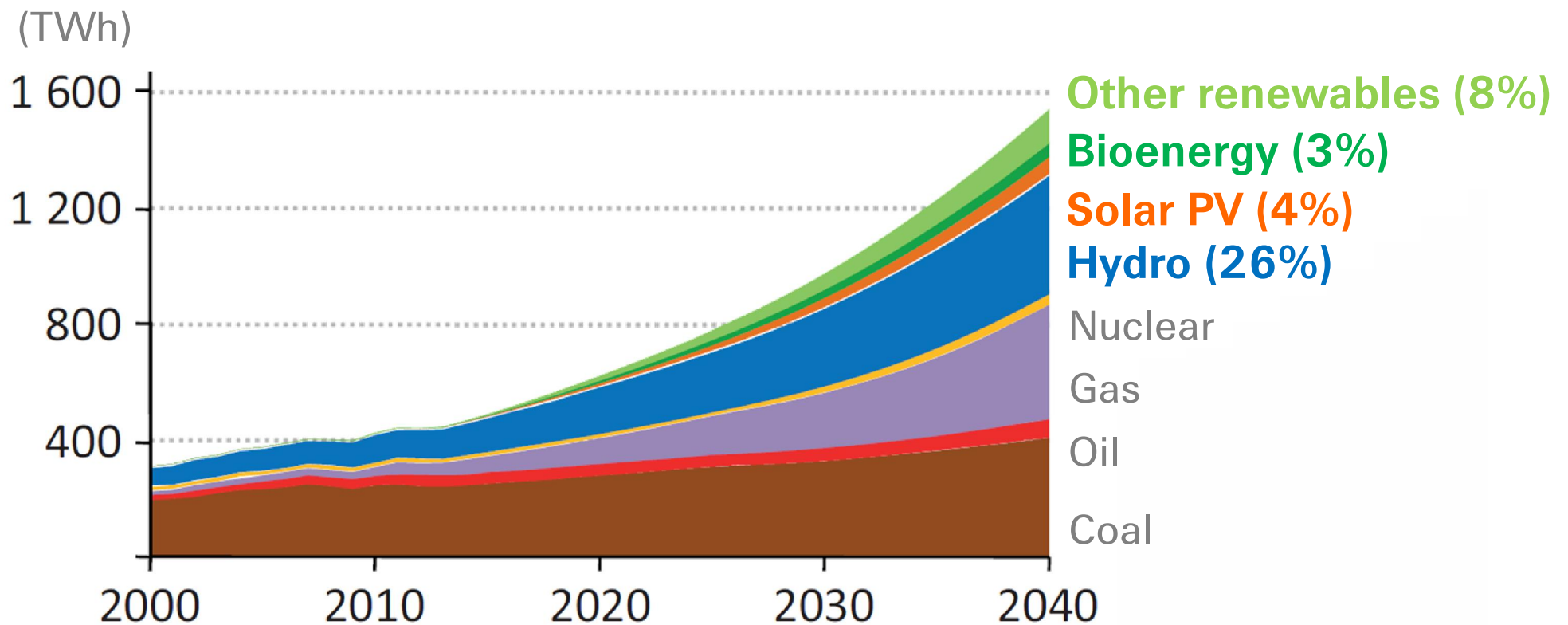


Renewable energy: Unique risks, unique solutions

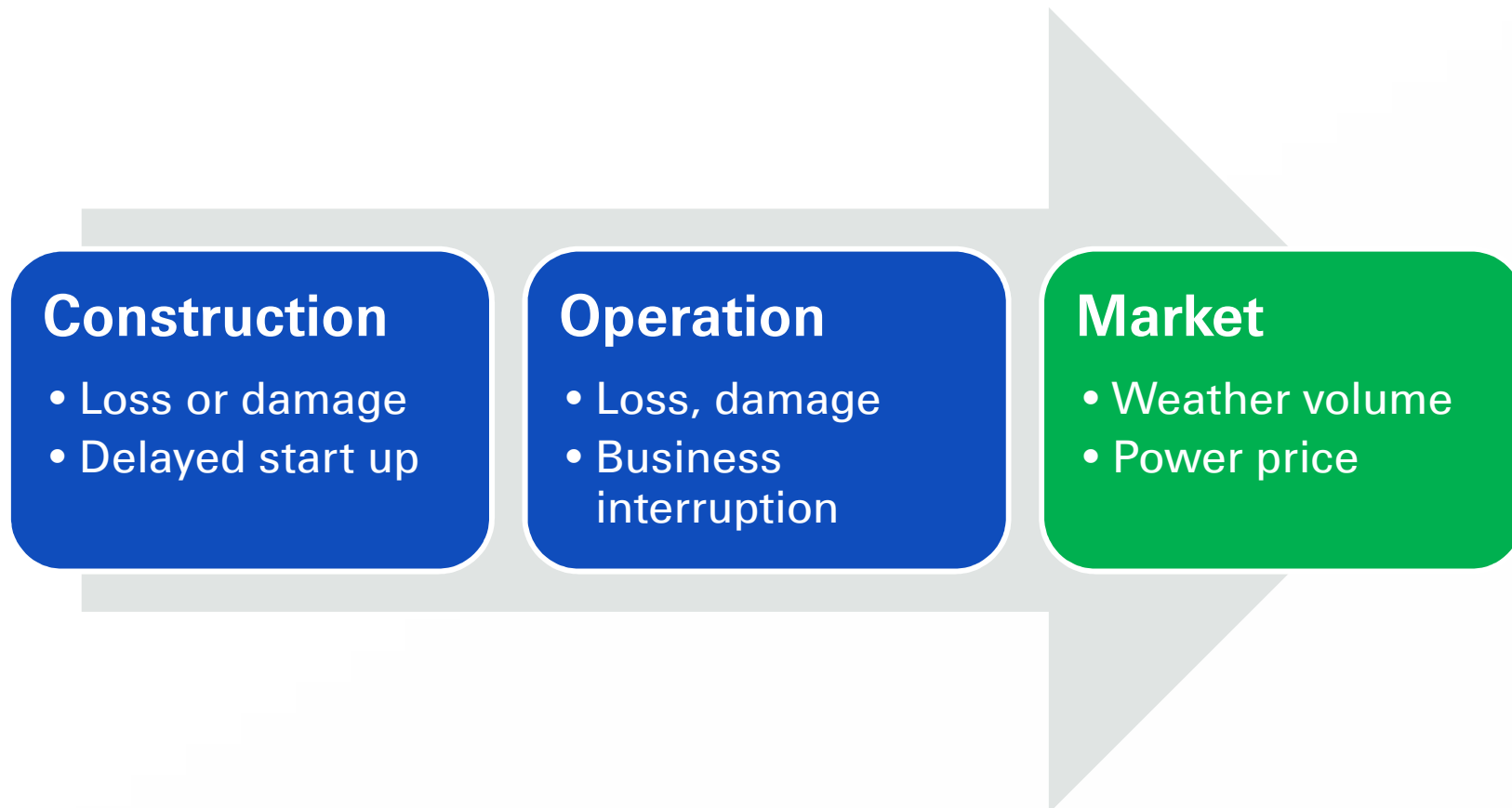
Reto Schnarwiler, Swiss Re

Generation by fuel in Sub-Saharan Africa 2000 – 2040



Source: Africa Energy Outlook 2014, International Energy Agency

Unique risks facing renewable energy projects



Weather risk strikes again: Akosombo hydropower plant (Ghana)



Source: [www.tripadvisor.com/Dianne Murray](http://www.tripadvisor.com/DianneMurray)

Case study: Hydro drought risk coverage (Uruguay)



Solution

- Tailored drought risk coverage that pays out when water levels fall below required levels.
- Trigger: Level of rainfall monitored at weather stations
- Settlement: Market price of Brent crude oil
- Time horizon: January 2014– June 2015
- Transaction Size: USD 450 million



Case study: Solar radiation cover (China)



Solution

- Tailored solar energy risk transfer that pays out when radiation falls below defined threshold
- Radiation/sunshine duration is measured by satellites and weather stations
- Efficient pay-out mechanism, no onsite loss adjustment required
- Insurance helps solar energy producers to access investment and loans
- Time horizon: November 2014 – November 2015



Conclusions

- Renewable energy sources will contribute a major portion to Africa's future energy mix.
- Important investments are required to achieve Africa's energy targets.
- Energy projects come with various risks (construction, operation, market).
- Innovative risk transfer solutions exist to address the risks specific to renewable energy.
- To address these unique risks, insurance can provide unique solutions.



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