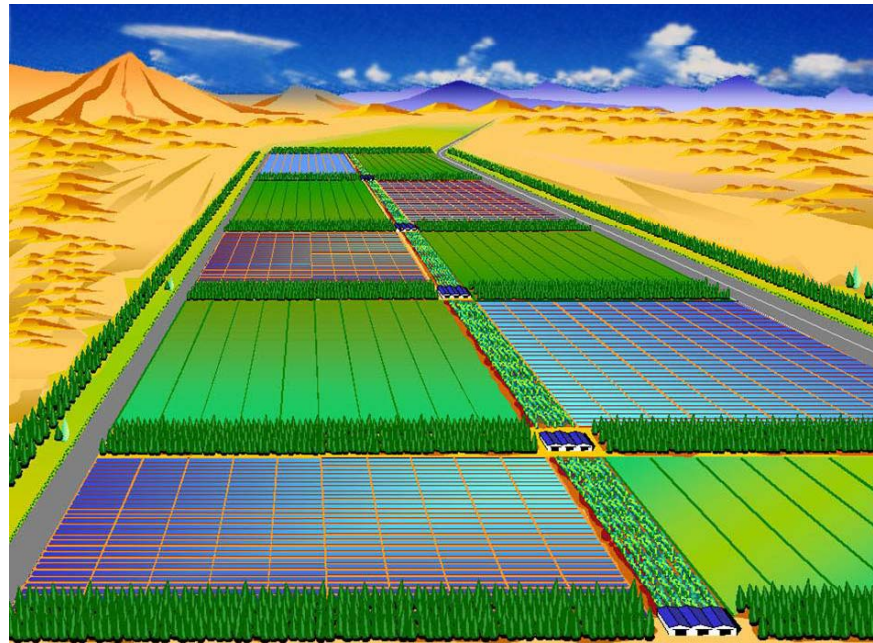


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# IEA PVPS Task8: Energy from the Desert

## Study on **V**ery **L**arge **S**cale **P**hoto**V**oltaic Power Generation (**VLS-PV**) Systems



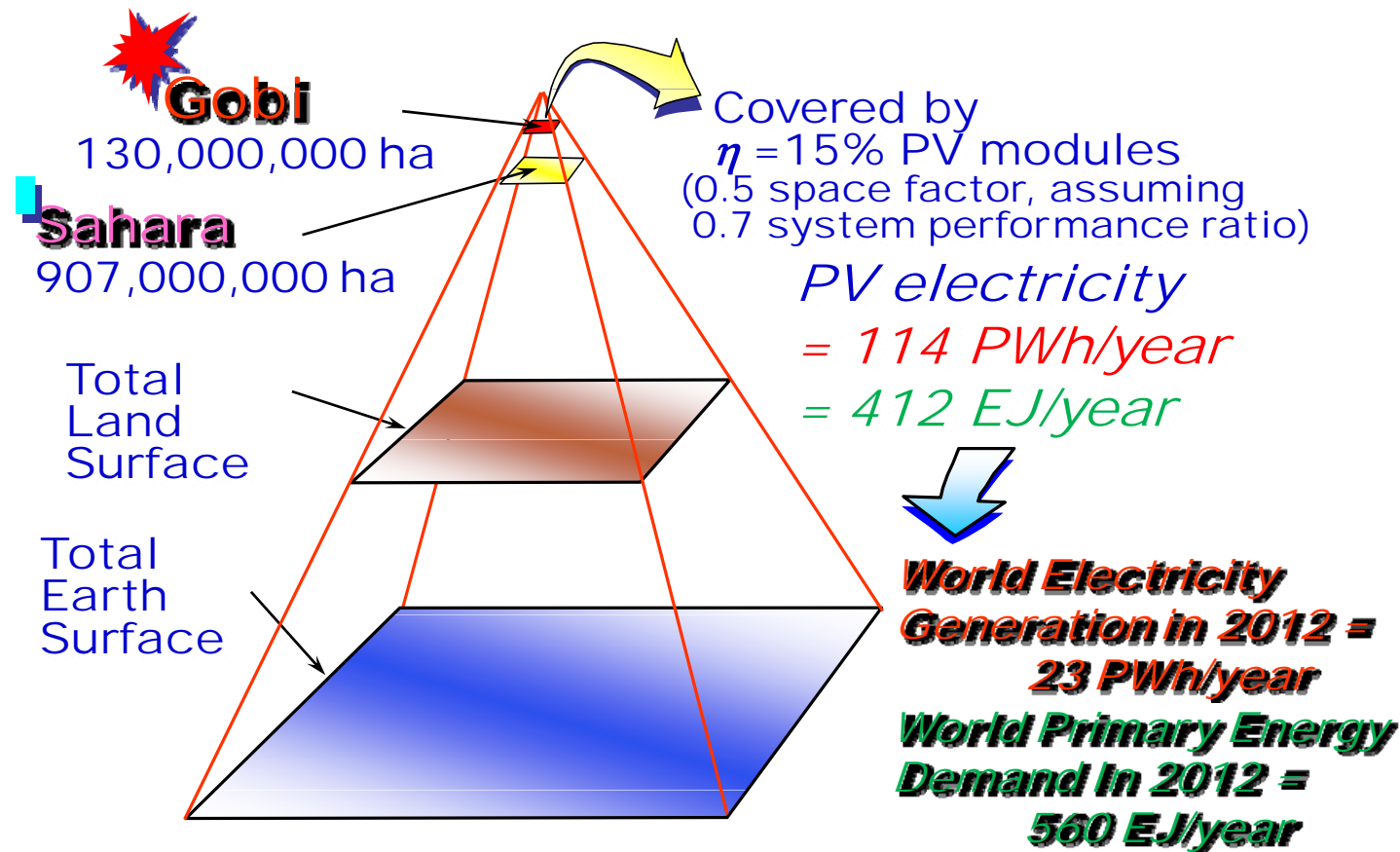
# IEA PVPS Task8

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- Objectives
  - To examine and evaluate the feasibility of Very Large Scale Photovoltaic Power Generation (VLS-PV) Systems, which have a capacity ranging from over multi-MW to GW
  - To accelerate and implement real VLS-PV projects
- Participating countries
  - Japan (Operating Agent), Canada, China, France, Germany, Israel, Italy, Korea, the Netherlands, Finland (observer), Mongolia (observer)
- Activity period
  - 1999 – 2014

# Solar Pyramid

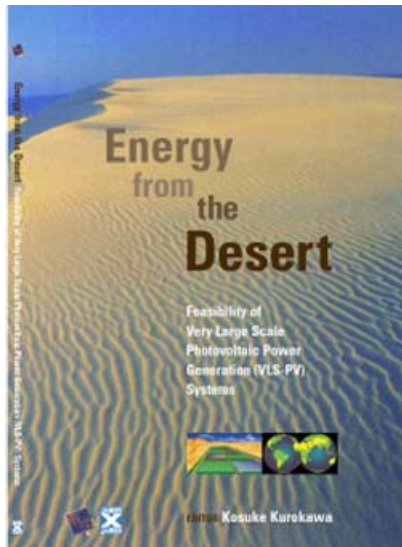
- 5 times of global electricity demand can be generated from Gobi desert!



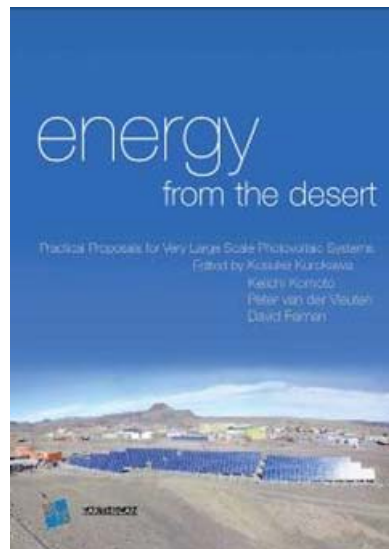
Ref. IEA PVPS Task8

# Energy from the Desert

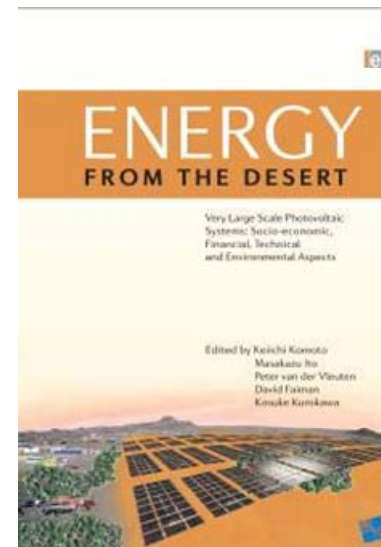
**Feasibility of Very Large Scale  
Photovoltaic Power Generation (VLS-PV)  
Systems:  
Published in 2003**



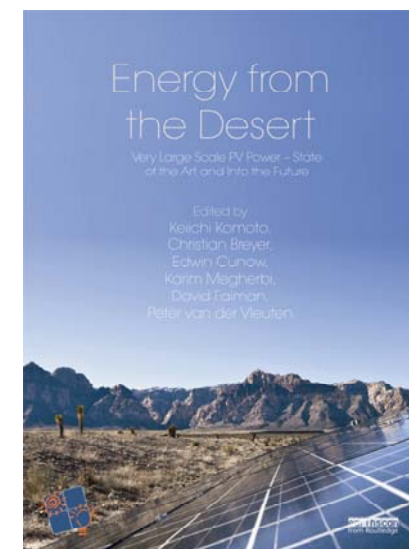
**Practical Proposals for Very  
Large Scale Photovoltaic  
Systems:  
Published in 2007**



**Very Large Scale Photovoltaic  
Systems, Socio-Economic,  
Financial, Technical and  
Environmental Aspects:  
Published in 2009**

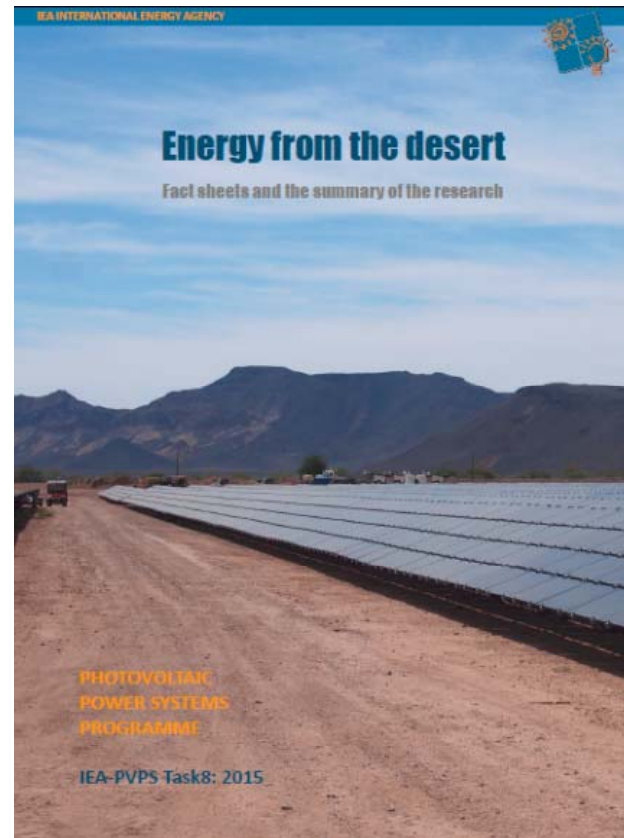
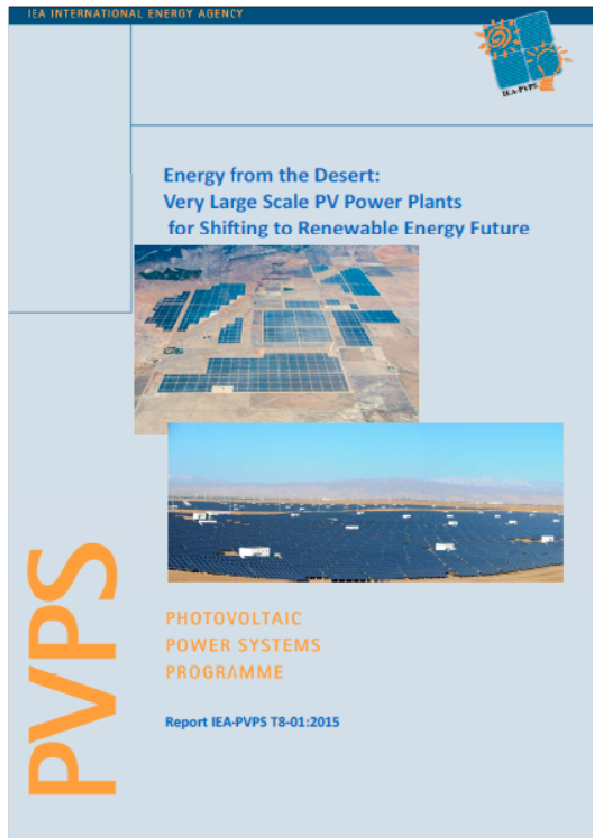


**Very Large Scale PV Power-  
state of the art and into  
the future  
Published in 2013**



# Energy from the Desert

## Very Large Scale PV Power Plants for Shifting to Renewable Energy Future *(February 2015)*



Available at the IEA PVPS website: <http://www.iea-pvps.org>

# Direction for accelerating PV power plants

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- It will be reasonable to expect that GW-scale PV power plants will come on the market in near future.
- Global deployment of PV power plants will be accelerated by developing energy supplying system combined with other renewables and energy storage technologies.
- Our precise study has revealed that 100% Renewable Energy system in North-East Asia reachable. PV will play important role although wind may dominates the region.
- The renewable energy can also be used to produce liquid fuel when the power supply surpasses the demand.
- Although there are technical and economic barriers to be solved for the renewable-based liquid fuel production system, low carbon energy system with 100 % renewable energy is certainly possible in the future.