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Small wind market and industrial development in China

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History



Phase 1 (late 70s – late 80s) :

- Size of 30W-2KW turbines small volume in production
- Use for the water pump with the blade diameter up to 8m

Phase 2 (1989 – 2002) :

- Most installed in the remote areas where there is no utility grid
- Nearly 200,000 installed in total

Phase 3 (2002 – 2010) :

- Over hundred small wind turbine manufacturers
- Size of 100W-20KW mainly

Current Situation



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- Good policy to support local small wind turbine manufacture
- Standards and safety regulations started to be established
- Over 100 players
- Very high percentage used for the hybrid street lights with solar panels
- In total about 300,000 in operation

Trend



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- Single turbine capacity increased (from previous 50-150w to 200-1000w)
 - Large turbine technologies (e.g. pitch control) started to be applied in small wind turbine
 - To be applied in large quantity in the areas of telecommunications, military and transportation system
 - Trial of grid tie application in very small volume

Problems

- Need to have a good supervision on the industry
- More advanced technology need to be applied
- There is no real direct support policy for small wind industry
- Need to link better from the local standard/regulation with international standard (e.g. IEC 61400-2)



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Thanks and questions???