Ibis Power
Ibis Power
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Information on Company
IRWES, and ReWES

Klokgebouw 112
5617 AB Eindhoven
The Netherlands

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www.ibispower.eu

Our Dream!

Redesigning Renewable Energy

Achievements

Awards

2014 UM Business Plan Competition (FL, USA)

2013 US Defense Energy Challenge (TX, USA)

2012 TedX Amsterdam Award (NL)

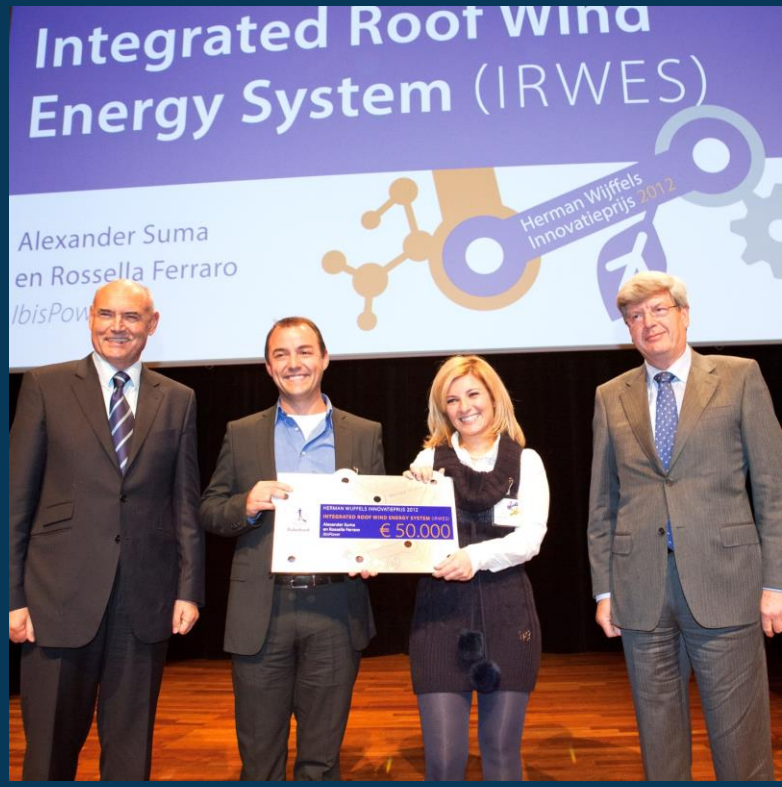
2012 Herman Wijffels Innovatieprijs (NL)

2012 BRAINS Award (NL)

2012 K-Idea Award (IT)

2011 TU/e Anniversary Award

2010 Research, Creativity, Innovation Forum and Citizens Award (FL, USA)



Grants

2015 H2020 SME Phase 2 (14.35/15.00)

2014 InterREG DE-NL

2013 Impulse Instrument, Prov. Brabant

2012 STW Valorization Grant Phase I&II

2011 Marie Curie Fellowship (EU-FP7)

Most Recent Developments

- Winner of the H2020 grant (EU score: 14.35/15.00)
- Moved to Strijp-S, Eindhoven
- Team expansion from 2 to 12 employees

Placements 2015

Rabobank Katwijk (1), August 2015

Woonbedrijf (3), October 2015

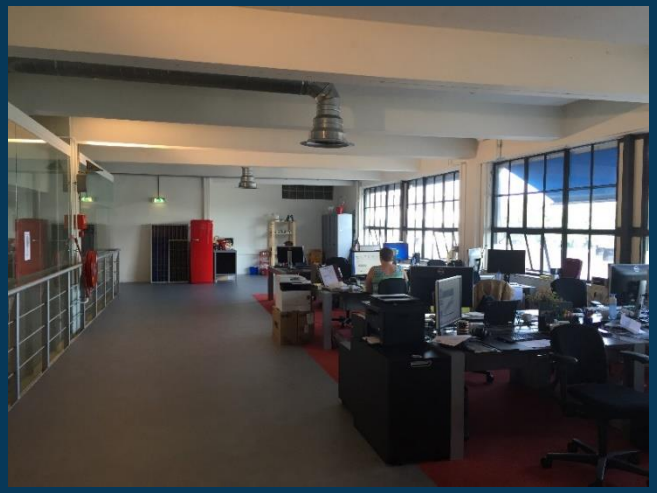
Agaatlaan Leiden (9), November 2015

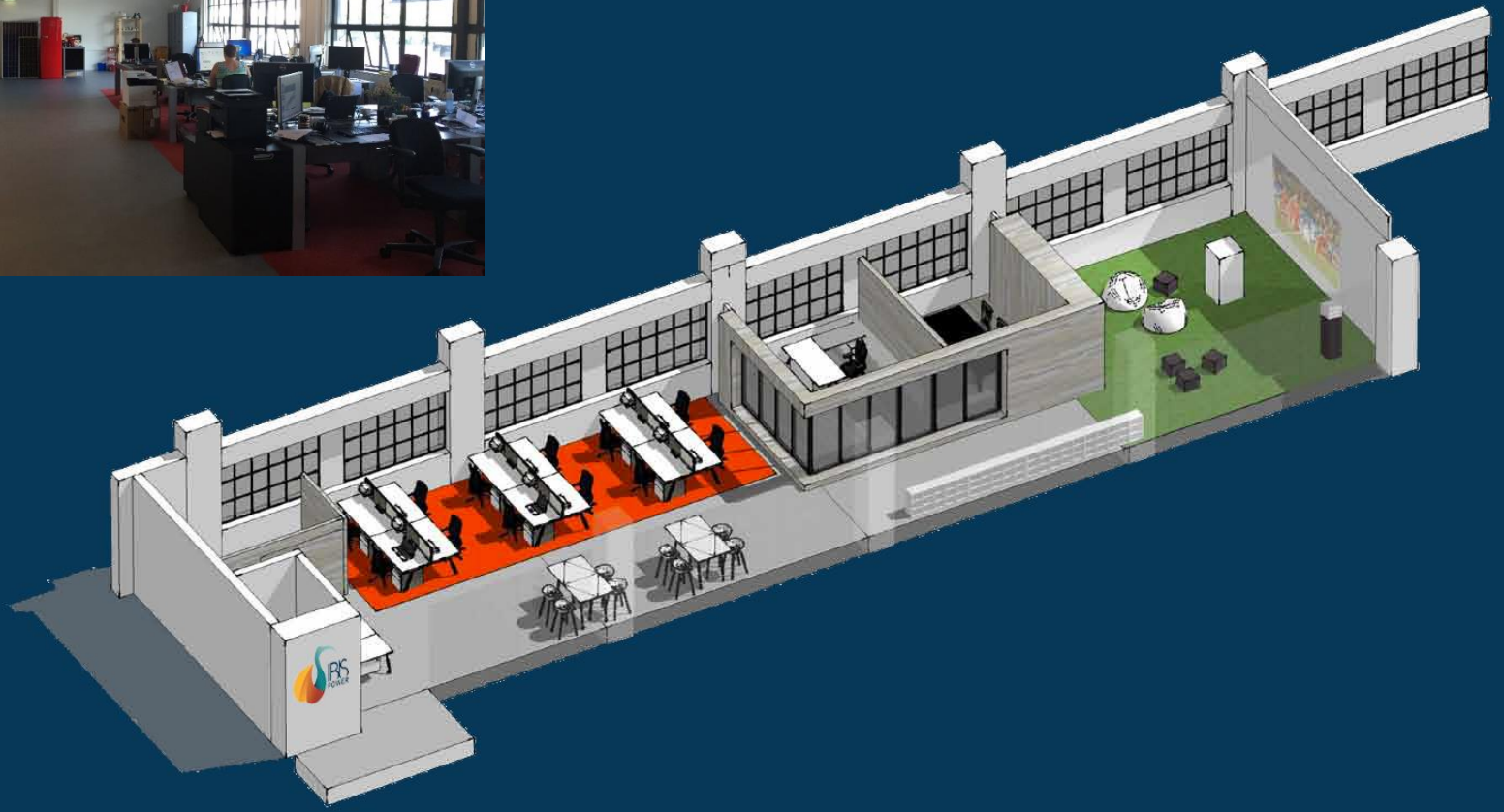
The Team

IBIS Power Team

The Location

New Office Location: Klokgebouw Strijp-S

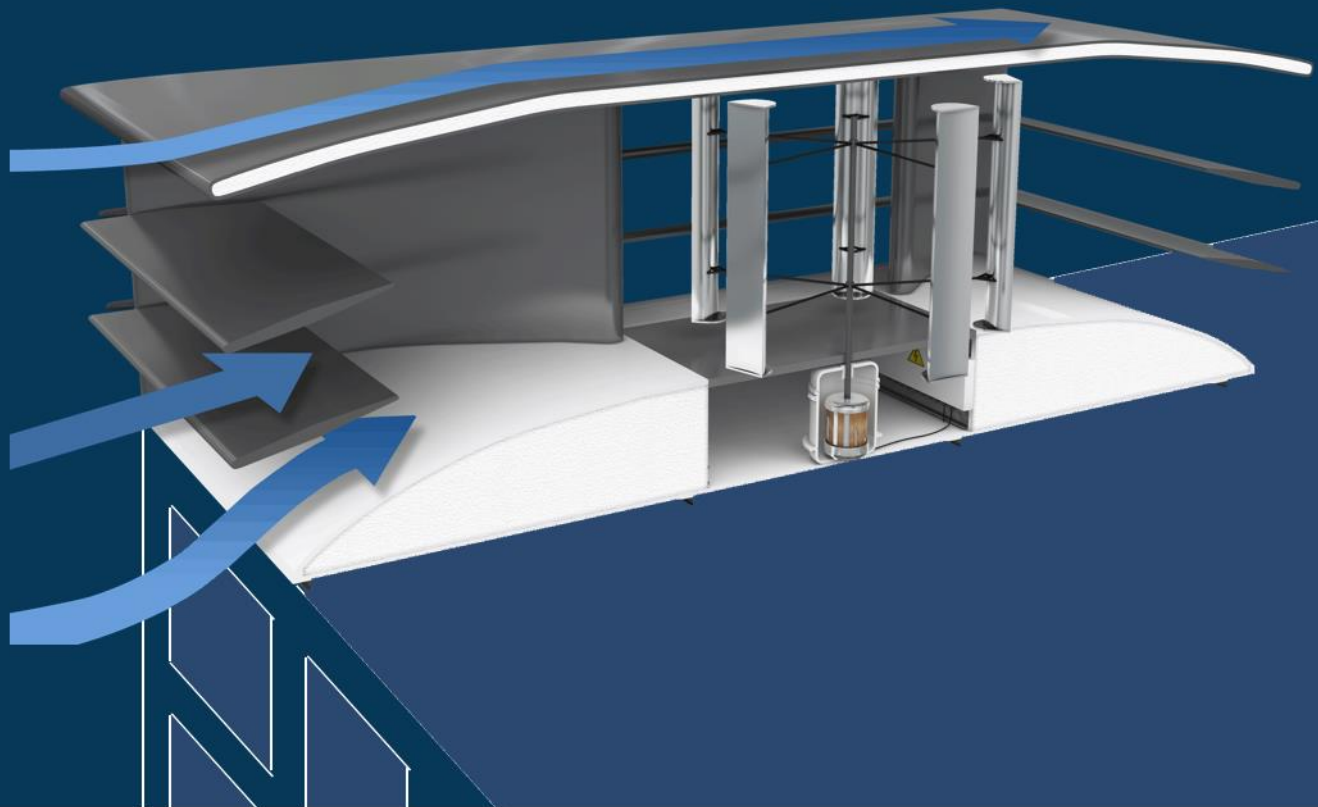




Integrated Roof Wind Energy System

The Solution of the Next Renewable Energy Generation!

- More Energy by Acceleration
- Effective Use of Lower Wind Speeds
- Wind Capturing from all Directions
- PV & Wind Combination
- Zero Noise



Rabobank Katwijk

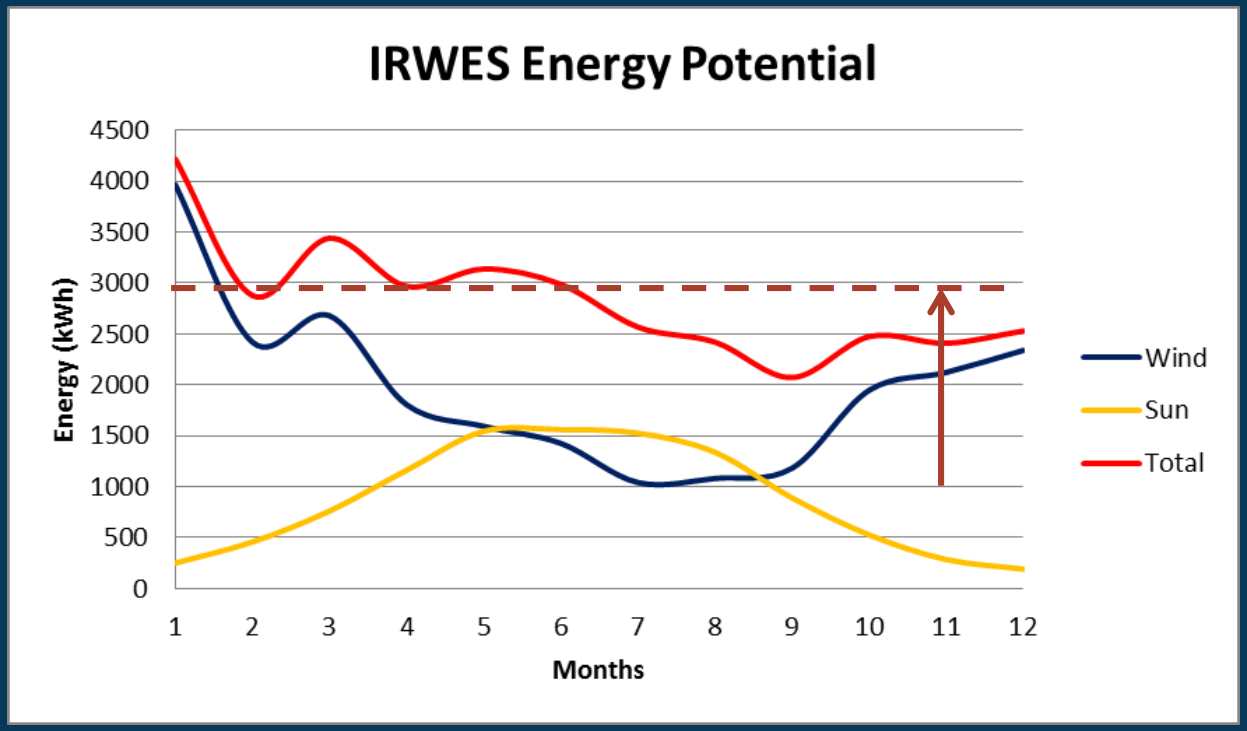
Demonstrator Rabobank

Integrated Roof Wind Energy System

Karel de Grotelaan Project – Eindhoven – Woonbedrijf - Impression Aireywijk

Integrated Roof Wind Energy System

Example Case: wind & sun
Urkhovenseweg, Eindhoven



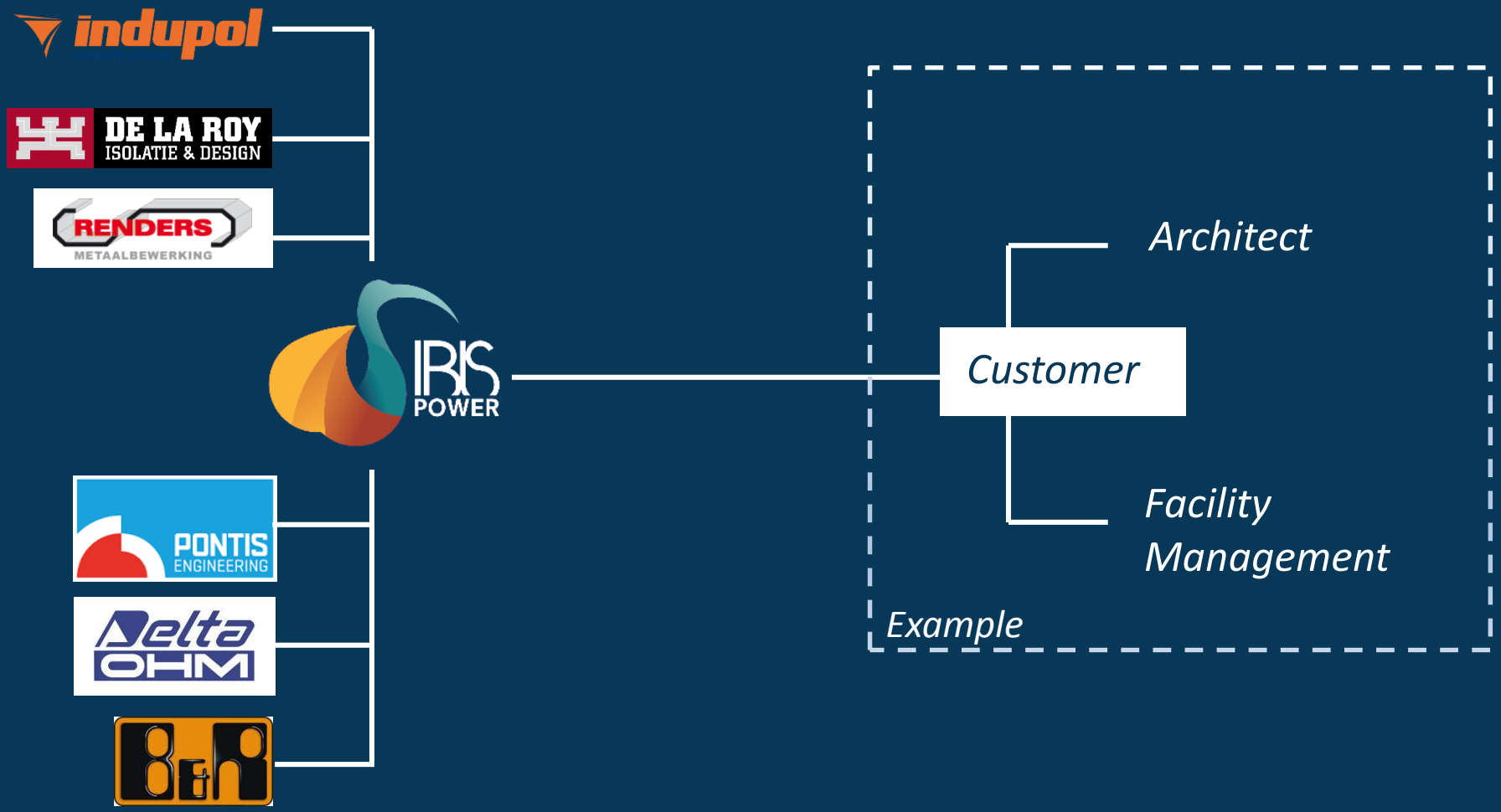
Annual Harvesting (kWh/year)

IRWES (wind)	16,000
PhotoVoltaic (PV)	10,000
IRWES (wind&PV)	26,000

Height = 35m, Size = 12x10m

Integrated Roof Wind Energy System

Project Consortium



Integrated Roof Wind Energy System

Project Outline

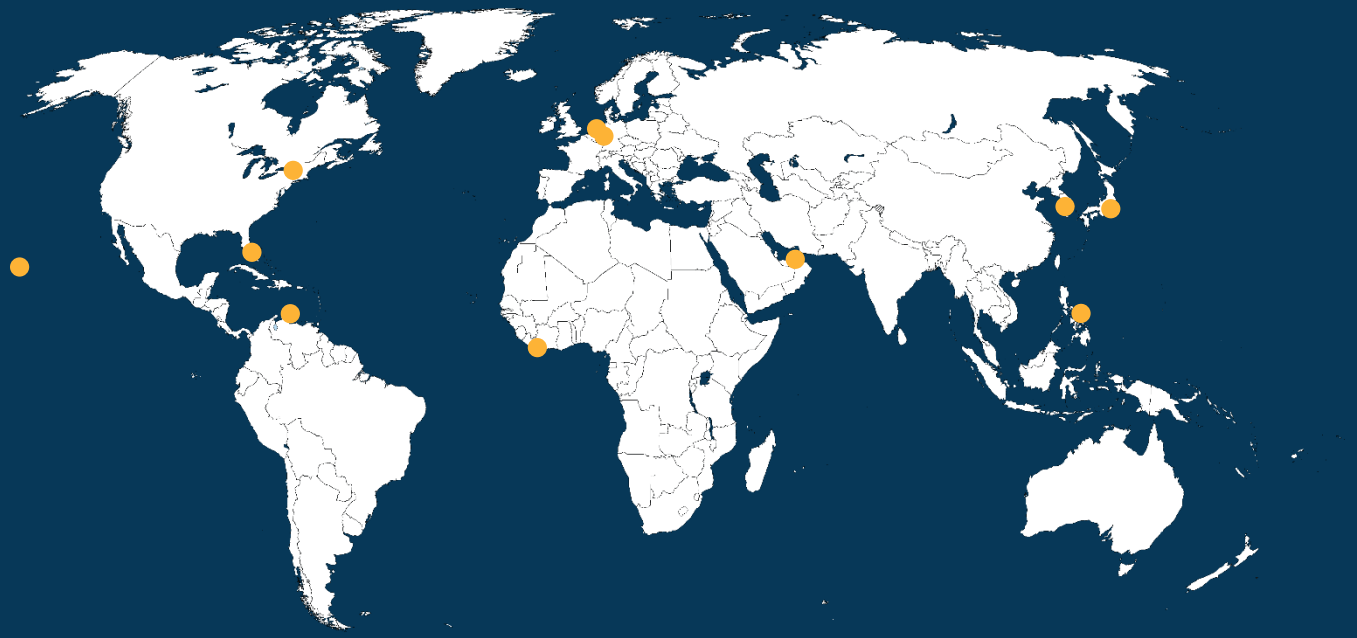
Phase 1

- Measurement or Simulation Plan (3 months + analysis)
- Business Case (cost and harvesting)

Phase 2

- Placement Agreement
- Design and simulations
- Production design
- Manufacturing
- Off-site testing
- Placement
- Opening

Integrated Roof Wind Energy System



Location	Wind Velocity [m/s]	Annual Wind Energy [kWh/yr]	Solar Radiation [kWh/m2/yr]	Solar Energy [kWh/yr]	Wind&Sun [kWh/yr]
Amsterdam (NL)	5.9	19,987	1,000	2,725	22,712
Aruba (NL)	8.7	62,907	2,000	5,451	68,358
Buffalo (NY, USA)	5.6	24,422	1,400	3,816	28,238
Dubai (UAE)	4.7	14,438	2,600	7,086	21,524
East Philippines (PH)	6.8	43,726	1,600	4,361	48,087
Honolulu (HI, USA)	5.8	27,133	2,000	5,451	32,584
Dusseldorf (GE)	4.7	14,438	1,000	2,725	16,261
Miami (FL, USA)	4.6	13,536	2,000	5,451	13,082
Monrovia (LR)	3.8	7,631	1,500	4,088	15,934
Seoul (KR)	4.4	11,846	1,600	4,361	16,207
Tokyo (JP)	5.9	28,261	1,400	3,816	32,077

Integrated Roof Wind Energy System

Bringing Effective
Renewable Energy Solutions
to the City!

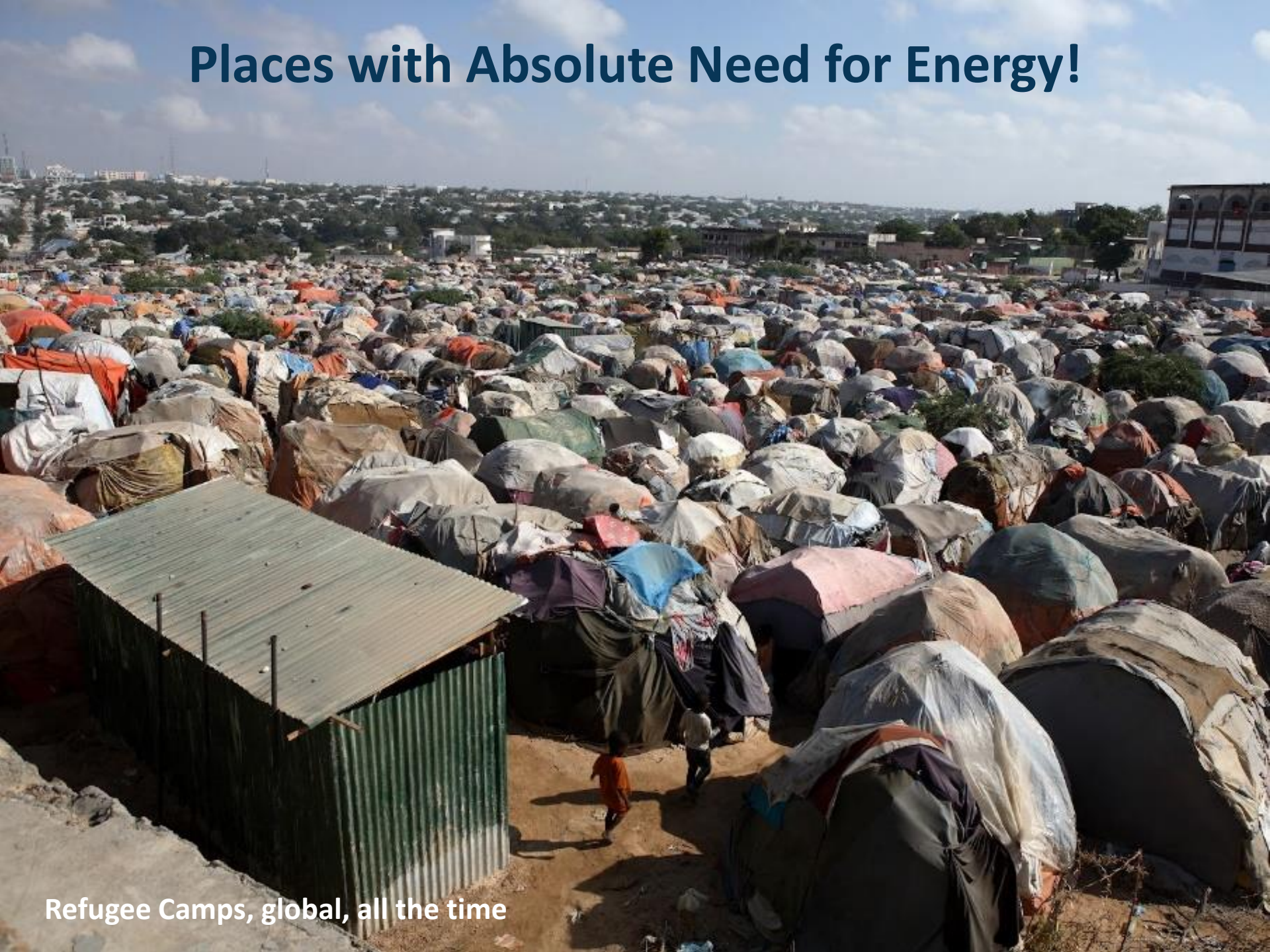
Our Next Innovation!

Remote Wind Energy System

Places with Absolute Need for Energy!

Philippines after Typhoon Haiyan, December 2014

Places with Absolute Need for Energy!



Refugee Camps, global, all the time

Power Outages

Maandag 23 februari 2015 | Het laatste nieuws het eerst op NU.nl

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Gepubliceerd: 02 september 2014 09:56
Laatste update: 02 september 2014 10:03

Als België deze winter te maken krijgt met extreem koud weer, zit het land mogelijk bijna vijf dagen zonder stroom.

Bij gemiddeld winterweer bestaat gedurende ruim twee etmalen kans op stroomuitval. Dat heeft netbeheerder Elia berekend, schrijft de Belgische krant *De Tijd* dinsdag.

Drie Belgische kerncentrales staan momenteel stil.

De nieuwe staatssecretaris voor energie Catherine Fonck denkt volgens *De Tijd* op basis van het rapport dat mogelijk te voorkomen is dat regio's op grote schaal van het elektriciteitsnet worden afgekoppeld.

In de berekening van Elia zou een aantal lichtere maatregelen, waaronder het uitzetten van de verlichting op snelwegen en publieke gebouwen, namelijk nog niet zijn meegewogen.

Noodplan

Fonck presenteert woensdag een noodplan voor het geval stroomtekort optreedt. Zij gaat ook kijken of het mogelijk is dat mensen hun wasmachine, droger of vaatwasser niet allemaal tegelijk aanzetten. "Het is een nieuw terrein voor ons, maar in het buitenland zijn er veelbelovende ervaringen", zegt Fonck tegen *De Tijd*.

België telt zeven kernreactoren. Twee daarvan staan sinds maart stil vanwege haarscheurtjes in de constructie. Een derde centrale viel deze zomer uit na sabotage.

Belgium, 23/02/2015

Cairo, 17/08/2014

MIDDLE EAST EYE

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Egypt's power outages continue to intensify

#Energy

Analysts say that while the current crisis has been expected since the Mubarak era, it will take at least a couple of years to reverse the situation

Power cuts in Cairo on 17 August due to high power consumption during the summer (AA).

San Francisco, 12/12/2014

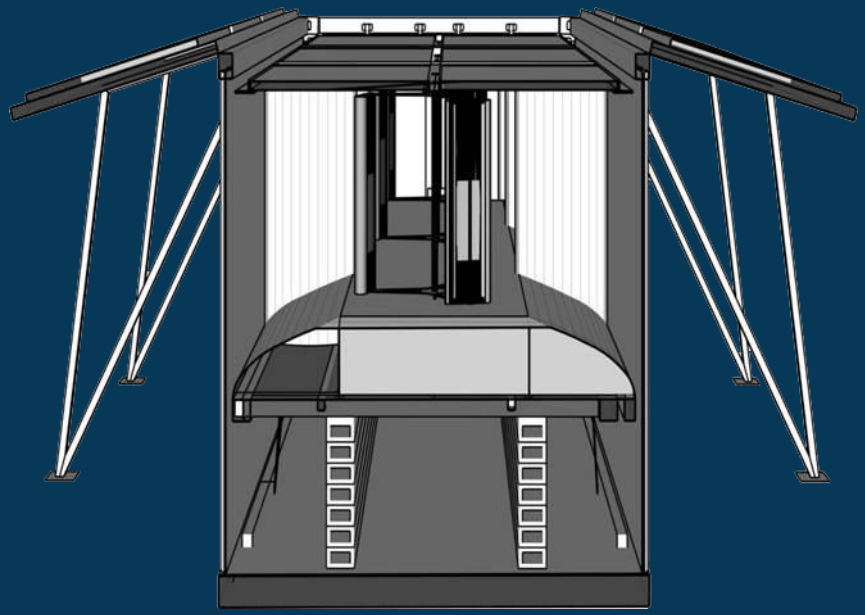
They All have In Common

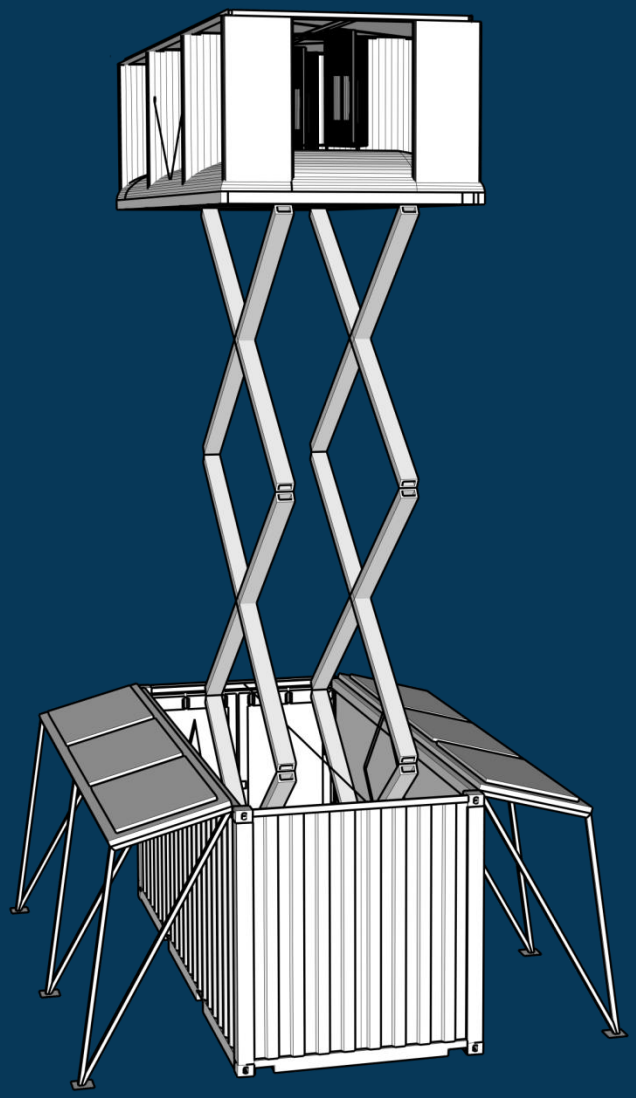
1. Urgent Need for Electric Power
2. No Supporting Power Infrastructure
3. Locations Hard to Reach for Standard Solutions

Human Safety, Health, and Development are Most Urgently at Stake!

Self Deployable!

Remote Wind Energy System





Remote Wind Energy System

The Philipines Solution!

- Wind & Sun Reliability
- Total Custom-Fit Solution
- Robust, mobile Structure
- Self Deployable and Storm Safe
- Low Operational Cost
- First Aid for Post-Disasters

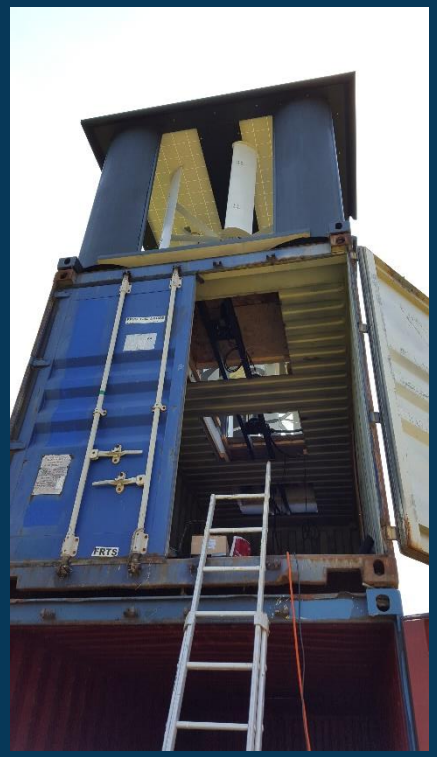

IRIS
POWER

Prototype

- Estimated completion date is May 2015
- 4.2 kW capacity of wind and sun
- One year of testing
- Move on to the next fabrication

Prototype

- 1 Year measurement and validation
- Prepare production
- MOQ 15 pcs. needed (molds)



Remote Wind Energy System

Problems of Current Solutions

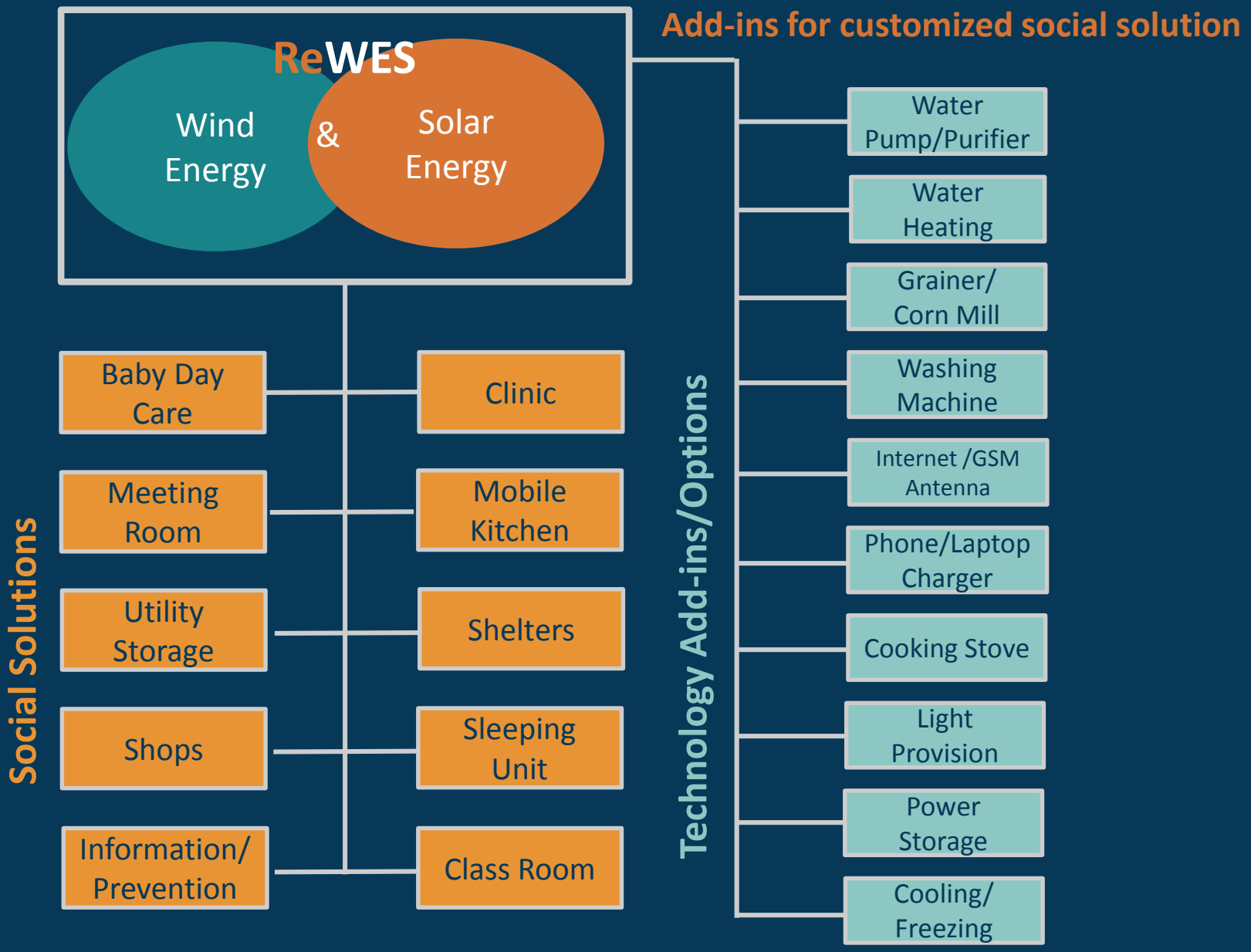
- **Diesel Generators** are noisy, unhealthy and dirty; they require high maintenance, fueling, and transportation costs
- **PV panels** do not withstand the harsh conditions (weather and sand), break easily, need large areas, and have heat problems
- **Small wind mills** have low efficiency, are not storm safe, and need elaborate foundations
- All current available solutions are stand-alone technologies, weather dependent, and do not offer a **complete solution**!

Remote Wind Energy System

ReWES Differentiating Value

- **Wind & Sun** in a single box for more energy availability, reliability and location independency
- Fast and easy to **transport**, self deployable
- **Low operational cost**, and easy to locally maintain
- **Robust**, resilient structure, absolute storm safe
- **Always charging**, no operational costs
- **Custom fit add-ins solution** and modularity for different needs and market segments
- **First-aid for post-disaster** and virus breakouts

Remote Wind Energy System



Total Solution

Village Support

East Philippines

7762 kWh/Year


2


3


1

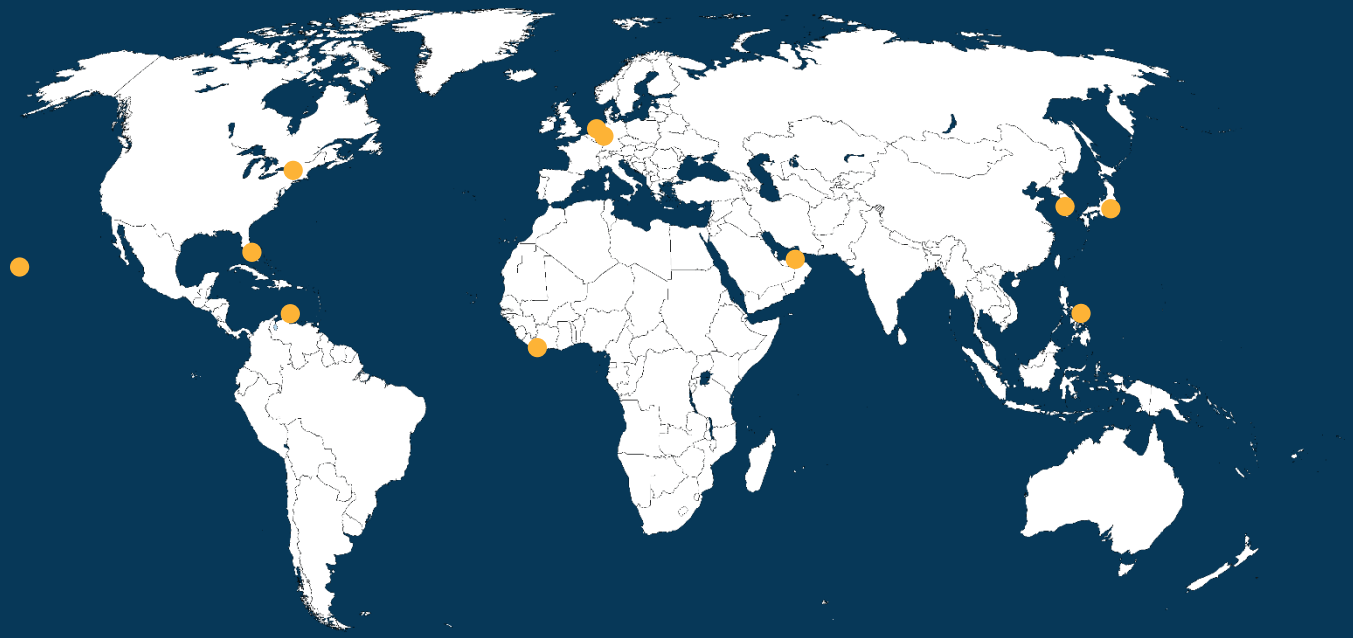

10


20


3


200

Remote Wind Energy System



Location	Wind Velocity* [m/s]	Wind Energy [Watt]	Annual Wind Energy [kWh/yr]	Solar Radiation** [kWh/m2/yr]	Solar Energy [kWh/yr]	Wind&Sun [kWh/yr]
Amsterdam (NL)	5.9	254	2,222	1,000	2,725	4,947
Aruba (NL)	8.7	813	7,123	2,000	5,451	12,574
Buffalo (NY, USA)	5.6	218	1,910	1,400	3,816	5,725
Dubai (UAE)	4.7	126	1,102	2,600	7,086	8,188
East Philippines (PH)	6.8	388	3,401	1,600	4,361	7,762
Honolulu (HI, USA)	5.8	243	2,132	2,000	5,451	7,583
Miami (FL, USA)	4.6	120	1,053	2,000	5,451	6,504
Monrovia (LR)	3.8	66	580	1,500	4,088	4,668
Tokyo (JP)	5.9	248	2,177	1,400	3,816	5,992

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