

Potential Map for the Introduction of Renewable Energy in Japan

 KOKUSAI KOGYO CO., LTD.

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Potential Map for the Introduction of Renewable Energy in Japan

Introduction



About Kokusai Kogyo Co., Ltd.

Background



*Spreading Renewable Energy(RE)
in Japan*

Case Study



*RE Potential Map in Japan
- Tokyo Solar Cadastre -*

Summary



Discussion of Potential Map



1 Introduction

About Kokusai Kogyo Co., Ltd.





2 Background of Spreading Renewable Energy in Japan



Awareness of Global Warming & Energy Security

March 11th in 2011



Debris



Power cut

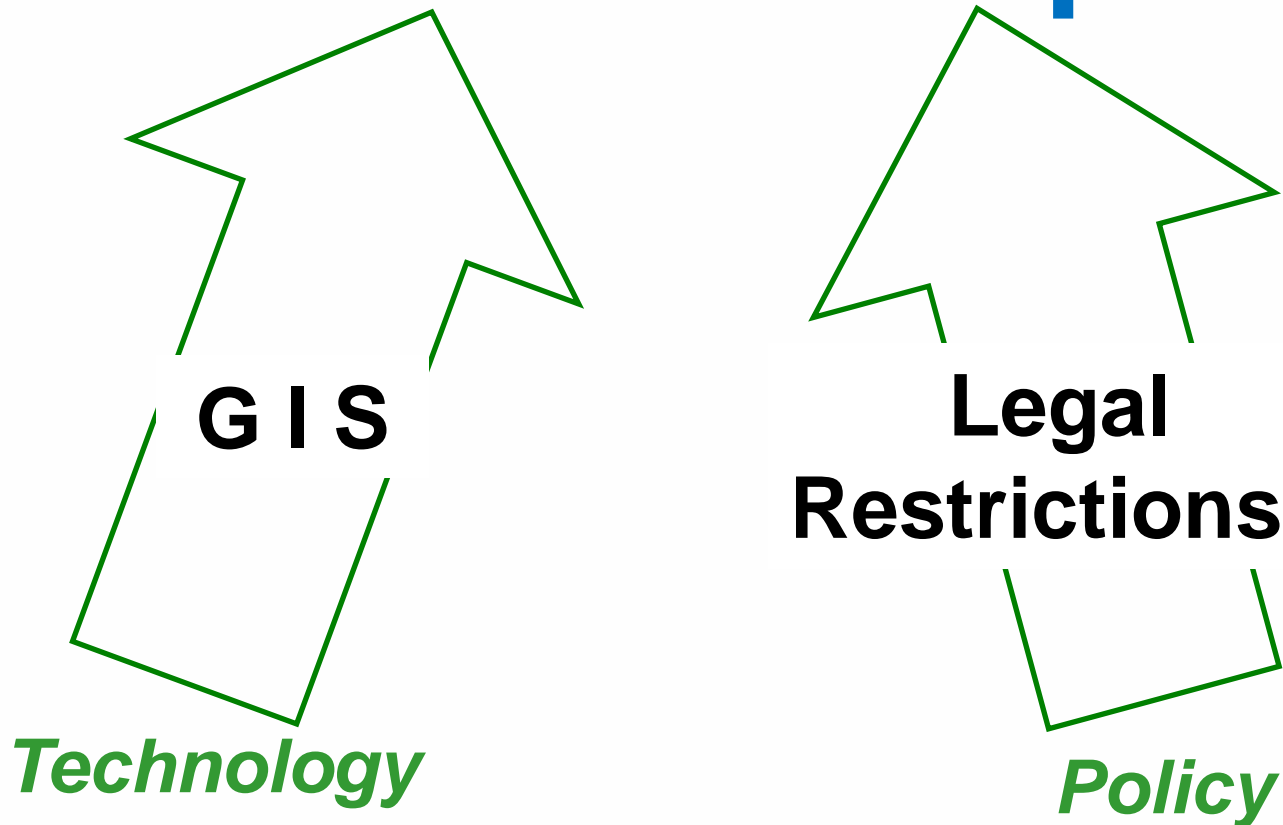
Renewable Energy(RE)

Generated Energy by RE “2030-Target : **3,00billion kWh**”
(more than 3 times as much as 2010) –*Energy and Environmental Council, 2012-*



Promote RE for Environmentally Sound Sustainable City

Potential Map



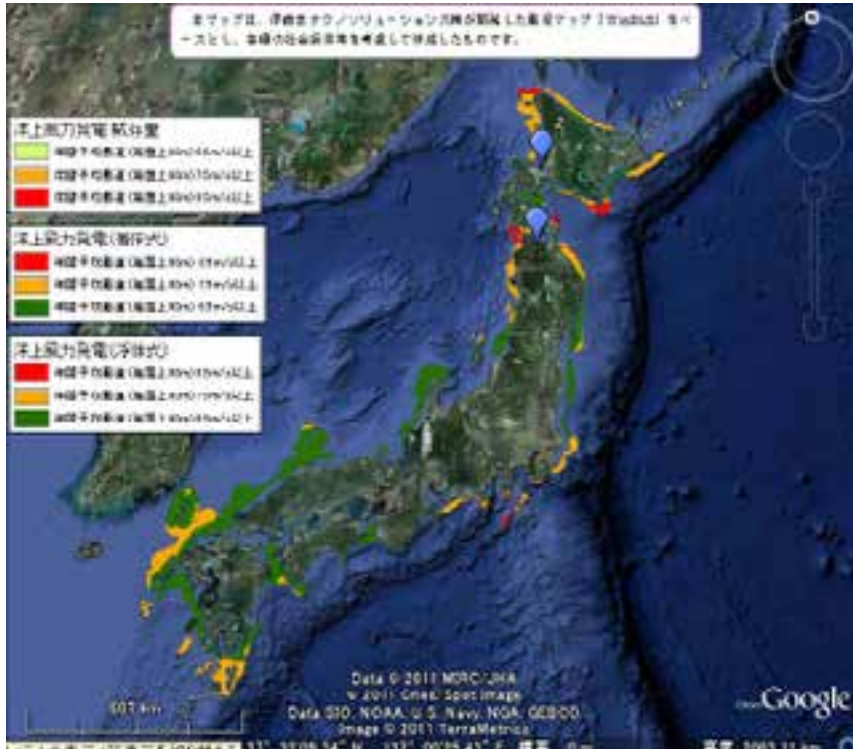


3 Case Study

-Renewable Energy Potential Maps in Japan -

Potential Maps in Japan

• Ministry of Environment



- Type
photovoltaic power(PV)
wind power
off shore Wind
small hydropower
geothermal power

- Data : KMZ
- Viewer : Google earth

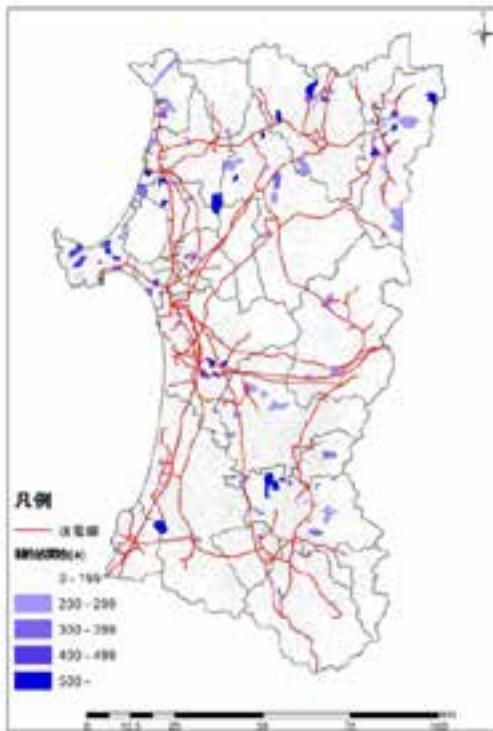
Potential Map of Off Shore Wind

Legend: colors show “annual average wind speed”

(URL: <http://www.env.go.jp/press/press.php?serial=13343>, June 2014)

Potential Maps in Japan

· Ministry of Agriculture, Forestry and Fisheries



- Type
photovoltaic power(PV)
wind power
off shore wind
small hydropower
woody biomass

- Data: SHP
- Viewer: PDF, Web-GIS, KML

Potential of Mega Solar (Akita Prefecture)

Legend: purple polygon(non-cultivated fields), red line(power cable)

(URL: http://www.kkc.co.jp/report/pdf/akita_houkokusho.pdf , June 2014)

Tokyo Solar Cadastre



おうちの屋根をチェックやね!

東京ソーラー屋根台帳 (ポテンシャルマップ)

- potential map for introduction of PV & Solar Heat to each building



- Type
photovoltaic power(PV)
solar heat

- Data: SHP
- Viewer: Google map

Potential of PV to Each Building

Legend: annual flux of insolation($kWh/m^2 \cdot year$) ; red $\geq 1,100$, $850 \leq$ yellow $< 1,100$
no-mark < 850 , or roof area $< 20m^2$

(URL:http://tokyosolar.netmap.jp/map/index_map.html, June 2014)

Tokyo Solar Cadastre -Feature -

- Wide Range & Many Buildings
(Tokyo about 2,200km² / Buildings about 2,600,000)



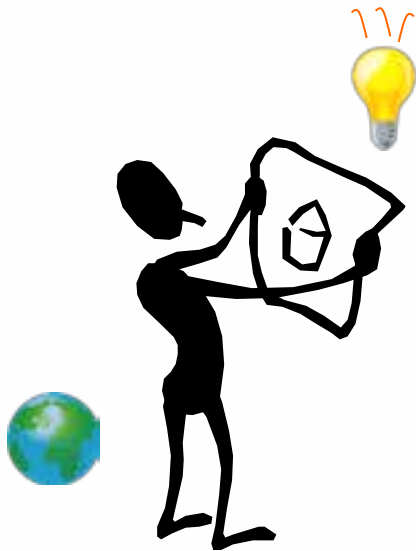
Location of Tokyo



Tokyo

Tokyo Solar Cadastre -Feature -

- capturing potential and supporting plans



For plan



For sales material

Use of Map

Tokyo city

- setting target value
- subsidization
- reference for roof rent

User

- planning for PV,
Solar Heat
- sales material

Tokyo Solar Cadastre -result-

1 Easier and Cheaper comparing with the past decade

(Digitize method → DSM method)



2 Covering Wider Range

3 Supporting introduction and city's strategy of RE

4 Data sharing with the related sections

5 Accessing : about 30,000 times April, 2014

(1,000times / day)



4 Summary

Discussion of Potential Map

To Promote RE and Eco-Friendly City

1 Specific Site

(ex: roof, non-cultivated fields)

2 Updating Data

(ex: DSM, legal restriction)

3 The Other Information

(ex: special zone, financial incentive)



Thank you for
your attention



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