

5 years RES4MED - Opening remarks

Mr. Vigotti (Secretary General, RES4MED)



Rome
May 3rd, 2012

Registration and welcome coffee

Welcome Address

Paolo Andrea Colombo, Chairman Enel

Opening Remarks

Piero Gnudi, Minister, Ministry for Regional

Launch event

Energia pulita
per lo sviluppo
del MediterraneoTre progetti industriali in campo per contribuire
alla crescita del Nord Africa e dei Balcani

di Laura La Posta

«C

he cos'è il Mediterraneo? Mille cose insieme. Non un mare, ma un insieme successivo di mari. Non una civiltà, ma più civiltà adiacenti. Non c'è stato dato come un paradiso gratuito, si è dovuto costruire tutto, spesso con più sforzo che altrove». Così Fernand Braudel scriveva nel 1949, su «La Méditerranée». Ed è significativo che la citazione sia stata ripresa nei documenti ufficiali di Res4Med, da quel post-siganture-piemonte delle rinnovabili che è Roberto Vigotti, anima del progetto.

L'alleanza di nove imprese ed enti italiani, appena presentata in un convegno internazionale a Roma (si veda il Sole 24 Ore del 22 aprile e del 4 maggio), rappresenta un nuovo tassello di un sogno in costruzione, già evocato da Braudel. Il sogno di un bacino del Mediterraneo unito nello sviluppo sostenibile, ricco di opportunità di crescita che alimentino le riforme evocate nella tormentata Primavera araba, che cementino un duraturo dialogo tra Israele e Palestina, che aiutino la Grecia a uscire dal rischio default, la Spagna e l'Italia a riemergere dalla recessione, i Balcani occidentali e la Turchia ad avanzare verso l'Unione europea.

Una sfida che passa anche per le leve dell'energia pulita, sempre più importante per un'area che conta il 7% della popolazione

molta. Un'area che, come ricordato da Bruno Lescoeur (Ceo Edison e vicepresidente dell'Osservatorio mediterraneo dell'energia, Ome), avrà bisogno del 40% in più di energia entro il 2020, per un totale di 380 gW di capacità aggiuntiva da installare (il 30% da fonti rinnovabili).

«Sono numerose le iniziative create per favorire la cooperazione in questo ambito», ricorda Francesco Starace, Cco di Enel Green power e presidente di Res4Med: «dall'Ome al Mediterranean solar plan, fino alle tre alleanze industriali Desertec, Medgrid e ora la nostra».

E i fondi per centrali pulite non ancora in grid parity (quindi perdenti rispetto ai combustibili fossili)? «Tra finanziamenti a fondo perduto, equity e linee di prestito dedicate, uno studio PwC ha rilevato 12,5 miliardi di euro attivati da Ue, Banca mondiale, Bei e Casse dei depositi nazionali, solo per lo sviluppo sostenibile del Medio Oriente e del Nord Africa», ha affermato Oliver Galea, ad dell'Advisory di PricewaterhouseCoopers in Italia.

«Mandateci progetti interessanti da sostenere: la Banca europea per la ricostruzione e lo sviluppo (Bers) intende attivare investimenti per 600 milioni all'anno, solo per l'energia», ha affermato il direttore generale del dipartimento energia, Riccardo Puliti (grande «cervello» italiano emigrato a Londra). Sullo sfondo, la stima di 350 milioni di investimenti in 20 anni. Un fiume di soldi soprattutto sul Nord Africa. Per cementare i sogni di Brau-

03 Mag 2012

CESTIONALE

Nasce Res4Med, la rete per l'energia «verde» nel Mediterraneo

Rappresentare la «rete delle reti» delle iniziative internazionali sulle rinnovabili, per dialogare con le istituzioni e favorire gli investimenti energetici nel Mediterraneo. E

Loans

Equity

Totale

1.113

2010/ in corso

12.517

Nota: *Cassa Depositi e Prestiti (Cdp), Caisse des Dépôts (CdC), Bei, Caisse de Dépôt et de Gestion marocchina (CdG), Edf Hermes, Commissione europea-Bei

Fonte: PwC, dal libro «Energia dal deserto» a cura di Roberto Vigotti

Il simbolo. La nuova maxi-centrale termodinamica di Kuraymat, in Egitto, che affianca il solare a un impianto a fonti fossili

L'alleanza a guida tedesca

Desertec lancia
i primi tre progetti

«C

isiamo: entro il 2016 dovremmo aprire le prime centrali elettriche pulite del progetto Desertec in Nord Africa, dopo tanti studi e attività di sensibilizzazione sui Governi locali, dal 2008 a oggi». È moderatamente ottimista il numero uno del consorzio industriale a guida tedesca, Paul Van Son, a Roma per il convegno di lancio dell'iniziativa italiana Res4Med. Procede lentamente il piano faraonico da 400 milioni di euro, nato fra difficoltà e accuse iniziali di neo-colonialismo (con polemiche sugli occidentali che vogliono «sacchiare il sole» agli africani per portare l'energia solare prodotta nel Sahara in Europa), «In Marocco stiamo supportando la progettazione di diverse centrali eoliche e solari, per 150 mW complessive», anticipa Van Son al Sole 24 Ore. «La tecnologia scelta sarà il solare a concentrazione (Csp). Stessa scelta in Algeria, dove potremmo attivare fino a mille mW, sempre se il quadro regolatorio sarà conveniente. In Tunisia, invece, sia-

Il consorzio voluto dai francesi

Medgrid studia
le reti low cost

È focalizzato sullo sviluppo di reti elettriche, senza produzione di energia in proprio, il progetto a guida francese Medgrid, operativo dal 2006 e ancora in fase di studio delle grid locali e delle tecnologie in campo. «Non servono costose dorsali sottomarine per portare l'energia dall'Africa all'Europa, basta ottimizzare le reti esistenti e attivare solo i collegamenti fra di loro - ha detto al Sole 24 Ore l'amministratore delegato del consorzio industriale Medgrid, Jean Koval, a margine del lancio di Res4Med Roma - Bisogna prima capire se esiste un mercato di questa energia verde prodotta in Nord Africa, quanta corrente elettrica potrebbe transitare, fare una ricognizione delle reti esistenti e dei problemi tecnici in loco. Per questo, stiamo lavorando a un progetto pilota di grid che, ottimizzando e mettendo in comunicazione i tronconi esistenti, sia in grado di portare l'energia dal Marocco alla Francia e viceversa». Reti low cost, quindi, per

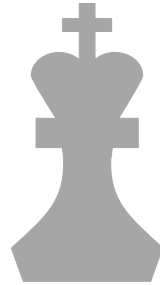
La nuova iniziativa

L'Italia in campo
con Res4Med

«U

n network di network, che lavora in sinergia con le altre iniziative per l'energia pulita nel Mediterraneo, attivando progetti industriali con benefici per tutti, a partire dalle popolazioni locali: questo l'obiettivo di Res4Med». Così ha definito la nuova alleanza il suo presidente Francesco Starace (Cco di Enel Greenpower), che per il lancio ha schierato ministri, diplomatici, banchieri, ad di società internazionali e i numeri uno dei progetti «complementari». Una potenza di fuoco attivata dai partner dell'iniziativa: «Oltre a Egn, PricewaterhouseCoopers, Edison, Cesi, Politecnico di Milano, l'ente pubblico Gse, Asja Ambiente Italia, Fondazione Bordini e Terna Plus (più Ape, Rse e Althesys)», racconta il segretario generale Roberto Vigotti. I primi macro-progetti - che intendono produrre energia per le popolazioni locali, non solo per risuocarla in Europa - saranno presentati il 5 ottobre. Potrebbero prevedere idroelettrico e termovaloriz-





FOCUS

From Med to Sub Saharian Africa

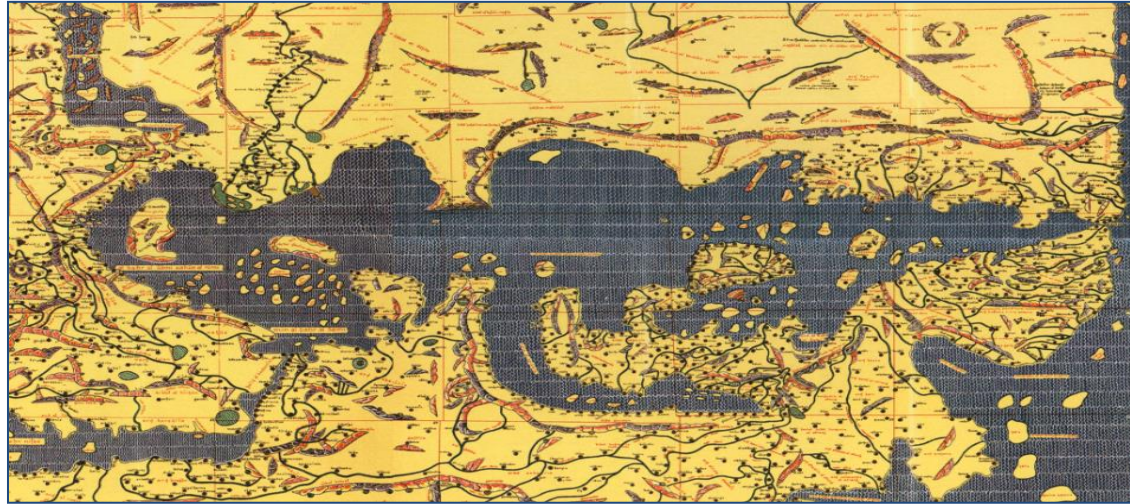
2012: Birth of the Association

*While the other initiatives were quite "eurocentric", **RES4MED** introduced a new paradigm for:
a direct dialogue among public-private partners of both shores,
listening to their needs
developing together strategies and plans*



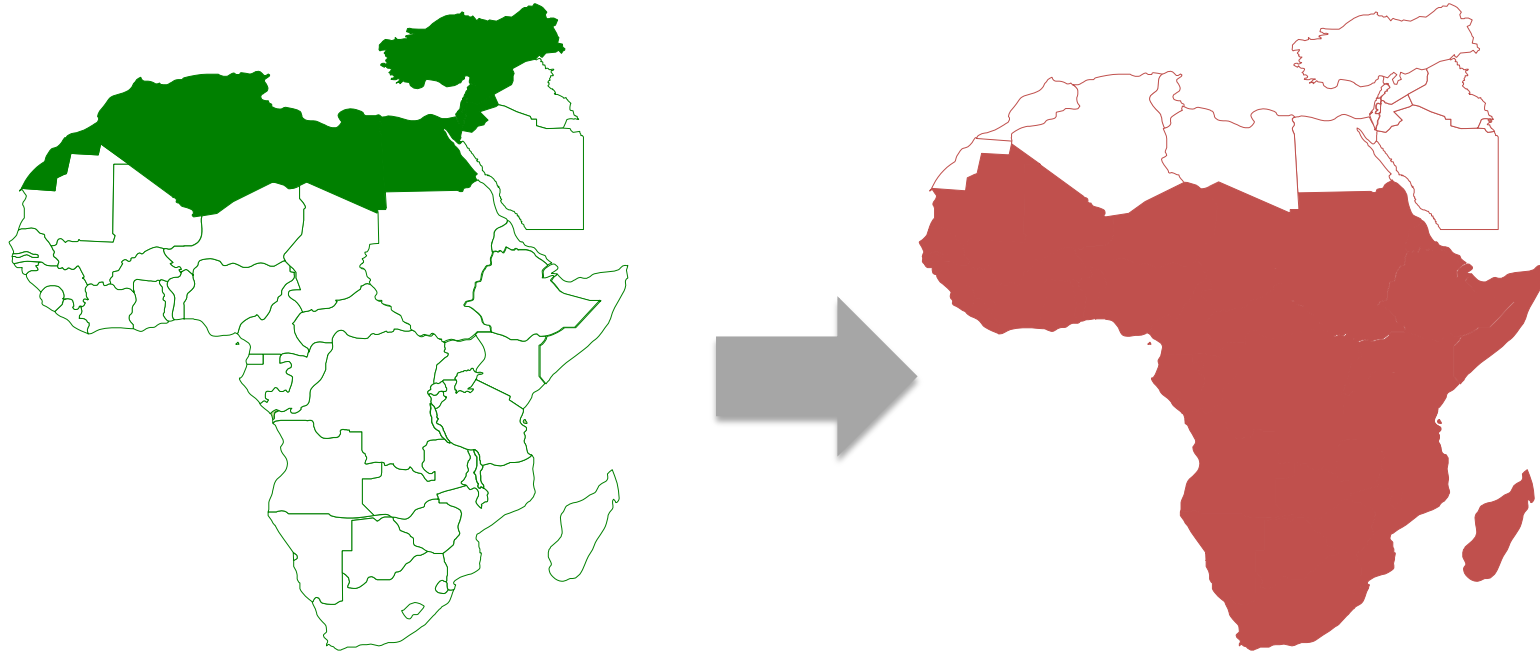
This “**upside down**” perspective has been the “**trademark**” of RES4MED.

This “**upside down**” **perspective** has a century long tradition in Med history....



The **Nuzhat al-mushtāq fi'khtirāq al-āfāq**, (*lit. "the book of pleasant journeys into faraway lands"*), known as the **Tabula Rogeriana**, created by the Arab geographer and scientist Muhammad al Idrisi in 1154 for the Norman King Roger II of Sicily.

2016: extension of the focus



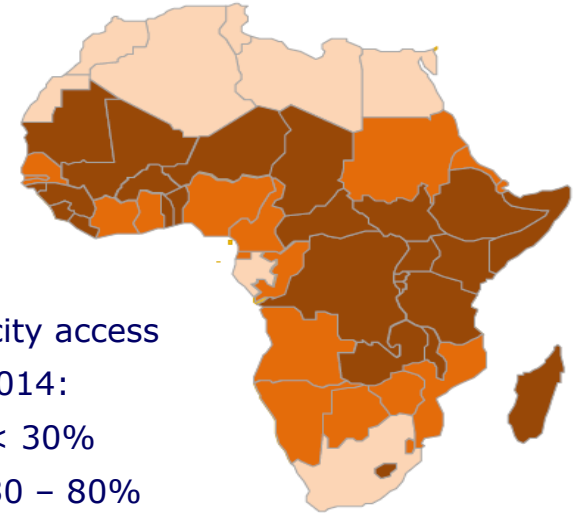
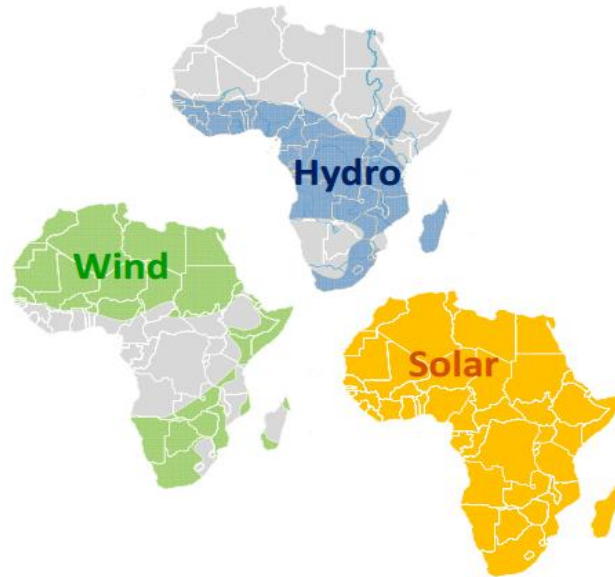
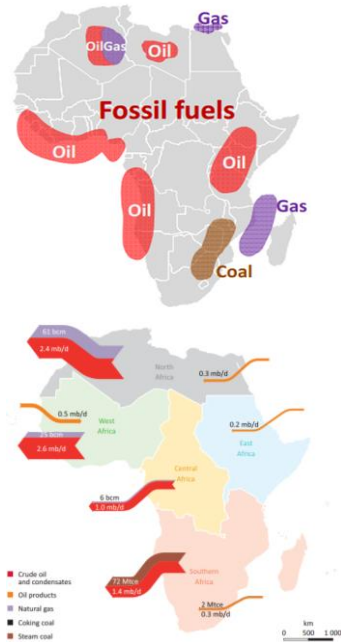
In 2016 we decided to **broaden the geographic scope towards sub-Saharan Africa** in light of the **huge potentials and growth opportunities** for Africa's RE sector
*"exporting and adapting our *modus operandi*"*

Why Africa?

**African continent is very rich
in resources**



...but poor in supply!



**2 out of 3 dollars invested in fossil
energy in africa goes abroad !!**

Source: International Energy Agency (IEA)

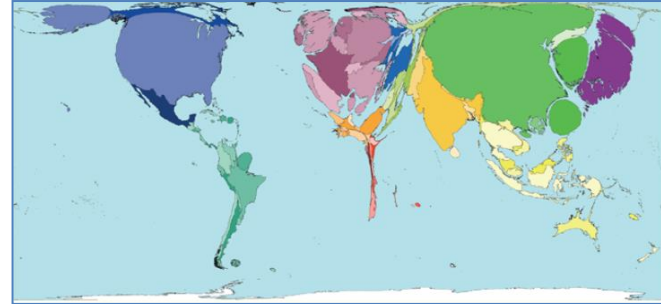
Africa if measured by...

Overwhelming geographical size

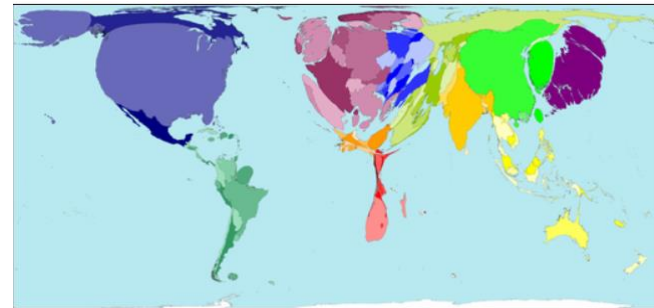
(China +USA+ India+ Mexico+ Peru+ France+ Spain+ Sweden+ Japan+ Germany+ Norway+ Italy+ New Zeland+ United Kingdom....)



Wealth



Electricity production





MEMBERS

2011



2012

asja
clean energy • clean planet

**ELETTRICITÀ
FUTURA**
imprese elettriche italiane

Terna
TERNA GROUP

FUB
Fondazione Ugo Bori
Ricerca e Innovazione

ALTHESYS
Strategie Consultants



Università Commerciale
Luigi Bocconi

2011

enel
Green Power

EDISON

GRUPPO GSE



**POLITECNICO
DI MILANO**

pwc

CESI
CENTRO STUDI E Ricerche

2012

asja
clean energy • clean planet

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POLITECNICO
DI MILANO

pwc

CESI
CENTRO ENERGETICO ITALIANO

2013



POLITECNICO
DI TORINO

2012

asja
clean energy • clean planet

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TERNA GROUP

FUB
Fondazione Ugo Borsari
Ricerca e Innovazione

ALTHESYS
Strategie Consultants

**Università Commerciale
Luigi Bocconi**

2014

italgen
passion for energy

iren

PÖYRY

CARRARO

2011

enel
Green Power

EDISON

GRUPPO GSE



**POLITECNICO
DI MILANO**

pwc

CESI
CENTRO STUDI E Ricerche

2013



**POLITECNICO
DI TORINO**

2012



2014



2011



2013



2015



2012



2014



2016



2011



2013



2015



2012



2014



2016



2011



2013



2015



2017



MEMBERS TODAY : more? More international?

Supporter Members



Ordinary Members

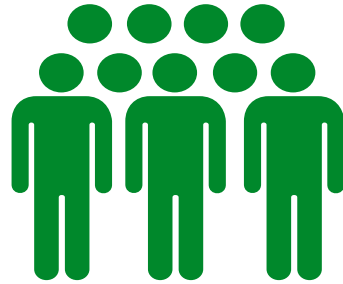


Associated Partners



Honorary Members





PARTNERS

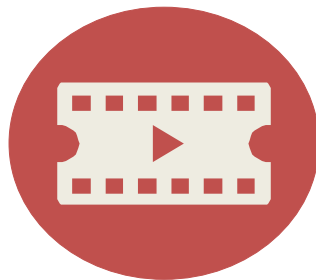


المكتب الوطني للكهرباء و الماء الصالح للشرب
Office National de l'Électricité et de l'Eau Potable

Branche Electricité





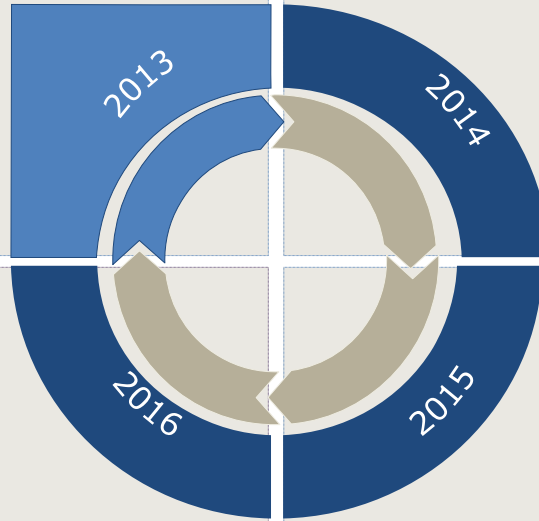


ANNUAL CONFERENCES

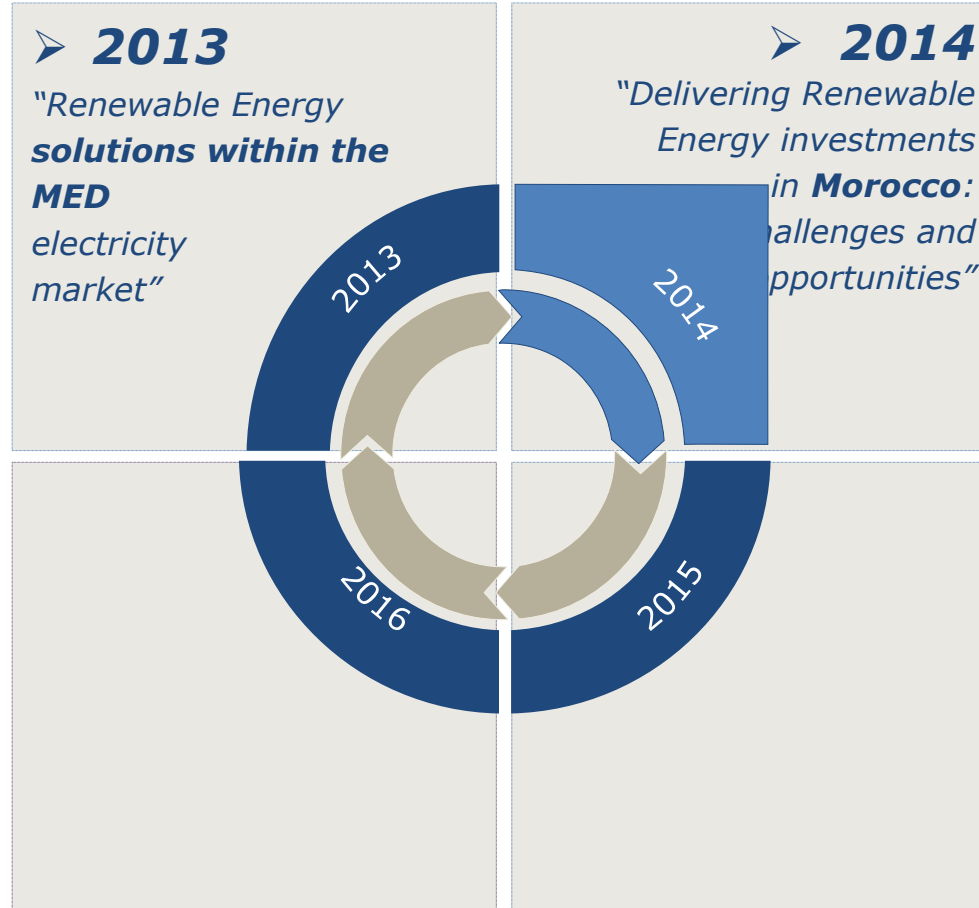
High-level annual conferences
dedicated to specific items or key markets

➤ **2013**

*"Renewable Energy
solutions within the
MED
electricity
market"*



ANNUAL CONFERENCES



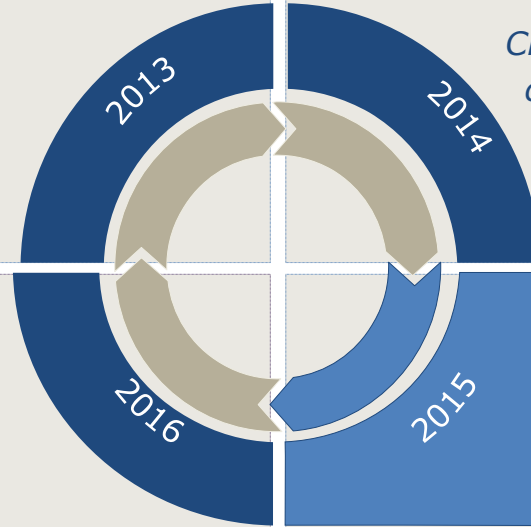
ANNUAL CONFERENCES

➤ **2013**

"Renewable Energy
**solutions within the
MED**
electricity
market"

➤ **2014**

"Delivering Renewable
Energy investments
in **Morocco**:
Challenges and
opportunities"



"Delivering
Renewable
Energy investments in
Egypt: Challenges and
opportunities"

➤ **2015**



ANNUAL CONFERENCES

➤ 2013

"Renewable Energy
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➤ 2014

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Energy investments
in **Morocco**:
Challenges and
opportunities"



2013

2014

2016

2015

"Enhancing
Investments
for Clean Tech
Solutions, **beyond MENA
towards Africa**"

➤ 2016


"Delivering
Renewable
Energy investments in
Egypt: Challenges and
opportunities"

➤ 2015



RES4MED "DAYS"

One-day "scouting" workshops
*fostering the dialogue between key local stakeholders and
RES4MED members*



2014 - RES4MED Day Morocco
- "A step change in the
deployment of RE solutions in
the Mediterranean"

In collaboration with **SIE**

Participants:

- Moroccan stakeholders,
- representatives of the Italian RE industry,
- banks and international operators

2015 - RES4MED Day Egypt - "A step change in the deployment of RE solutions in the Mediterranean"

2014 - RES4MED Day Morocco
- "A step change in the deployment of RE solutions in the Mediterranean"

In collaboration with **RECREEE**

- **High level Egyptian panelists:** M. Elsobki (NREA), H. Waheed (EgyptERA), K. Abu Bakr (Italian-Egyptian Business Council), etc;
- **Representatives of Italian RE industry:** EGP, Edison, Terna, Italgen, MegaCell, Airlight Energy, Carraro and D'Appolonia.

2016 - RES4MED Day **Morocco** -
"Morocco and Italy for the transition to
clean energy towards Africa"

2015 - RES4MED Day **Egypt** - "A
step change in the deployment of
RE solutions in the Mediterranean"

2014 - RES4MED Day **Morocco**
- "A step change in the
deployment of RE solutions in
the Mediterranean"

- **High level Moroccan panelists**

M, Bakkoury (CEO, MASEN), A. Baroudi (Director General, SIE), A. Nakkouch (Director General, Nareva), M. El Halaissi (Director General, Banque Marocaine du Commerce Extérieur)

- **MoU between SIE & RES4MED**

2016 - RES4MED Day **Morocco** -
"Morocco and Italy for the transition to
clean energy towards Africa"

2015 - RES4MED Day **Egypt** - "A
step change in the deployment of
RE solutions in the Mediterranean"

2014 - RES4MED Day **Morocco**
- "A step change in the
deployment of RE solutions in
the Mediterranean"

2016 - RES4Africa Program
launch **Kenya** - "A step
change in the deployment
of RE in Eastern Africa"

- In collaboration with **KEPSA**;
- 202 Participating Companies;
- **344 Participants**;
- 10 sessions - 72 Speakers;
- 40 journalists from Italy and Kenya;
- More than **60 B2B Meetings**.

2016 - RES4MED Day Morocco -
"Morocco and Italy for the transition to
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2015 - RES4MED Day Egypt - "A
step change in the deployment of
RE solutions in the Mediterranean"

2014 - RES4MED Day Morocco
- "A step change in the
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the Mediterranean"

**2016 - RES4Africa Program
launch Kenya** - "A step
change in the deployment
of RE in Eastern Africa"

**Next steps: Oct 2017 -
RES4Africa Day Ethiopia**

2016 - RES4MED Day Morocco -
"Morocco and Italy for the transition to
clean energy towards Africa"

2015 - RES4MED Day Egypt - "A
step change in the deployment of
RE solutions in the Mediterranean"

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deployment of RE solutions in
the Mediterranean"

**2016 - RES4Africa Program
launch Kenya** - "A step
change in the deployment
of RE in Eastern Africa"

**Next steps: Oct 2017 -
RES4Africa Day Ethiopia**

**Next steps: Nov 2017 -
RES4Africa Day Kenya**



TRAINING & CAPACITY BUILDING

In collaboration with



**POLITECNICO
DI MILANO**

The two-week course consists of lectures on the main technical, regulatory and financial features given by qualified international and Italian experts, academics (PoliMi, Bocconi) and highly skilled technicians, matched with visits to innovative laboratories and power plants.

Participants:

2014 – 1st edition



2015 – 2nd edition



2016 – 3rd edition



Middle managers **from SEMCs**



Middle managers **from SSA**



Ph.D. students



RES4MED members



in collaboration with



POLITECNICO
DI TORINO

- The **one-week intensive course** in May 2016 held in Torino – Lingotto Politecnico Campus;
- **Lectures** providing participants with a set of technical, economical and regulatory tools to assess the most appropriate **energy efficiency solutions**;
- **Site visits** to: IREN Torino North Power Plant, Asja landfill biogas and PV power plant in Pianezza, TOTEM Energy production plant, etc.

Participants:

2016 – 1st edition



Middle manager from SEMCs



Middle managers from Balkans



Ph.D. students



RES4MED members

Next: Africa Micro-Grid Academy

in collaboration with



Participants:

- Project aims to gather **young local individuals** and just-graduated international students;
- The cultural “clash” has a huge role in terms of **innovative ideas and creation of start-ups.**

Training activities:

1. Advanced training courses;
2. Permanent training;
3. On-occasion knowledge-deepening activities;
4. Online remote classes;
5. Experimental activities.

*The geographical focus of the project is **Eastern Africa**, while the training activities are intended to take place in **Nairobi, Kenia**, at **KPLC Training Institute**.*

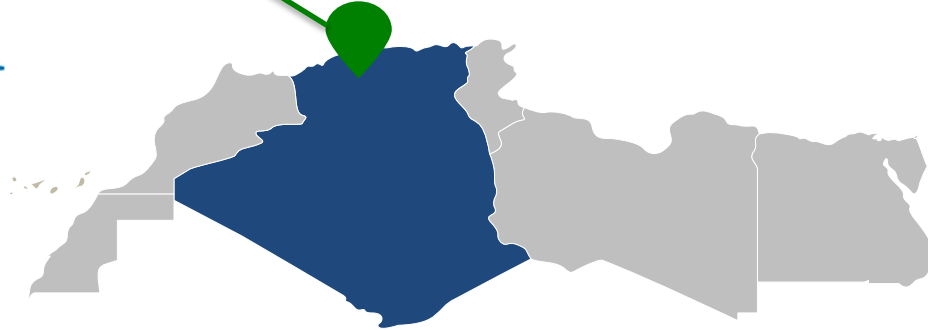


EXECUTIVE SEMINARS

Three-days *in depth two ways* exchange of know how and experiences with engineers and middle managers at partners' organizations

Algeria Executive Seminar *In collaboration with **Sonelgaz***

13-15th February 2017



To provide participants with a set of technical and financial tools to assess the most appropriate solutions in different energy contexts for an effective integration of renewables in the electricity system.

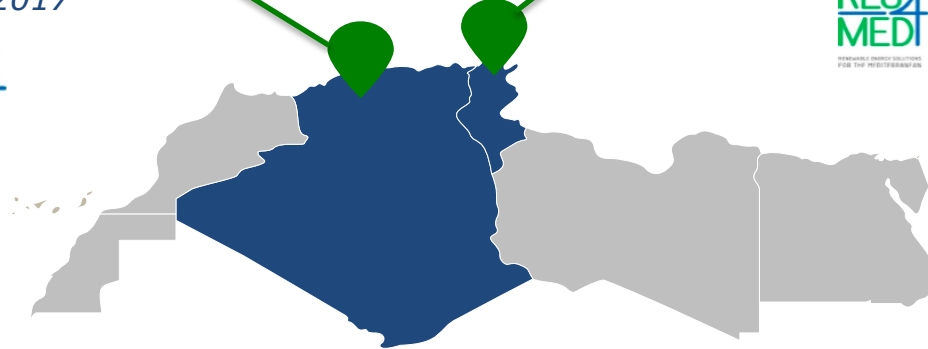
Algeria Executive Seminar
In collaboration with **Sonelgaz**

13-15th February 2017



Tunisia Executive Seminar
In collaboration with **STEG**

3-5th May 2017



To provide participants with a set of technical and financial tools to assess the most appropriate solutions in different energy contexts for an effective integration of renewables in the electricity system.

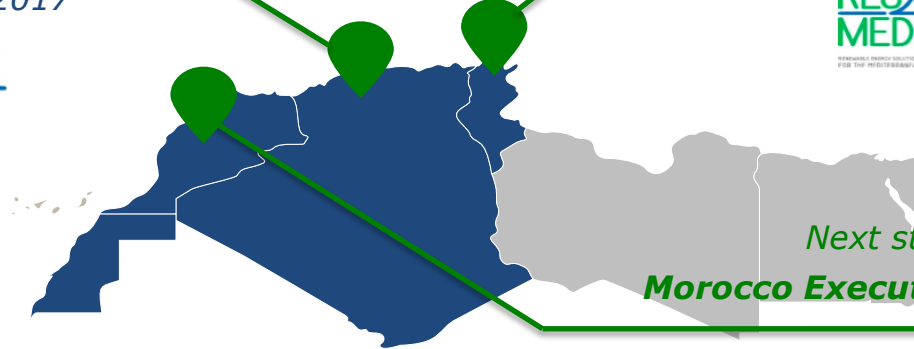
Algeria Executive Seminar *In collaboration with **Sonelgaz***

13-15th February 2017



Tunisia Executive Seminar *In collaboration with **STEG***

3-5th May 2017

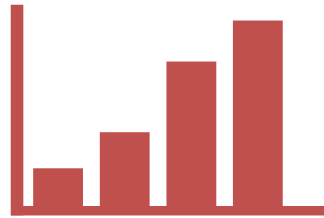


Next step: **Morocco Executive Seminar**

Fall 2017 - tbc

To provide participants with a set of technical and financial tools to assess the most appropriate solutions in different energy contexts for an effective integration of renewables in the electricity system.

Proceedings available on RES4MEd website



DEDICATED STUDIES

Country profiles

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 - 2.5 Electricity demand
 - 2.6 Electricity Supply
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 - 3.2 Renewable energy policy
 - 3.3 Renewable energy implementation mechanisms
- 4 CURRENT AND PLANNED PROJECTS
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 - 4.2 Build Own and Operate (BOO) scheme
 - 4.3 Feed in Tariff (FiT)
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 - 5.3 Energy investments and co-operation
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 - 5.5 Investments and Capital

Available on RES4MED website



**November
2015**



**March
2016**



**November
2016**

Next: Algeria and Jordan

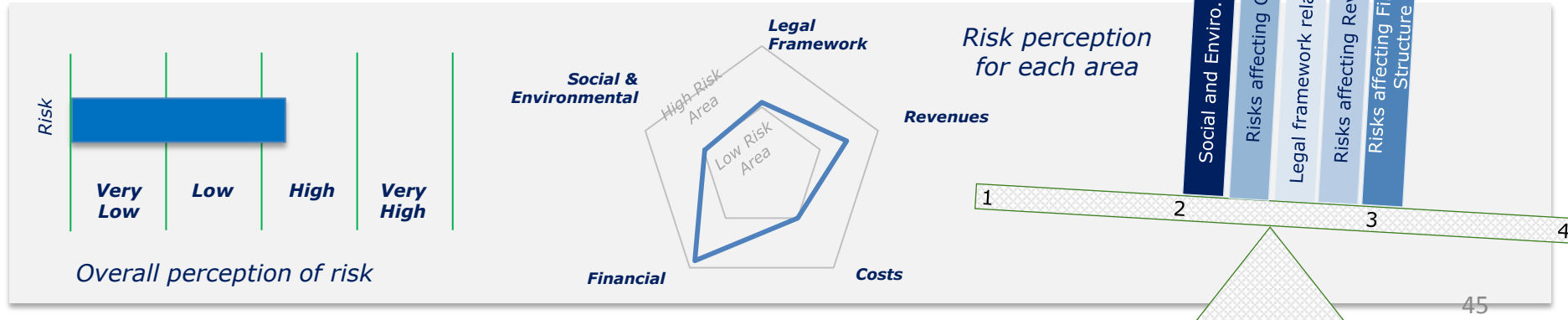
Survey on main risks to RE investments

In collaboration with



This survey aimed to create basis for an **open discussion between** the two sides of the business arena (**public policy makers and private investors**), in order to match their respective viewpoints. The **Survey participants** were composed by companies which have planned activities or are already engaged in investments, clustered into 3 stakeholders groups: industry, financial players and professional services.

The main findings – **Egypt** example

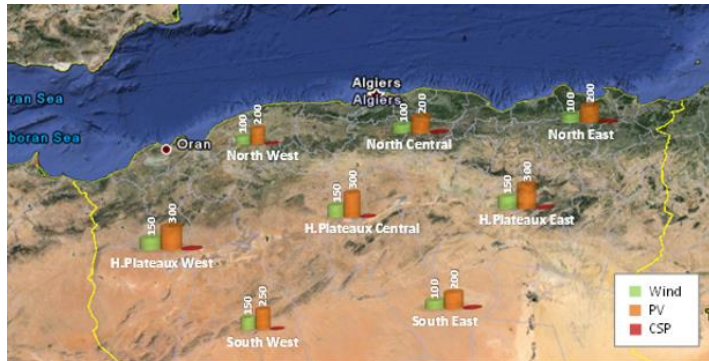


"Integration of RE in the national electric system of Algeria"

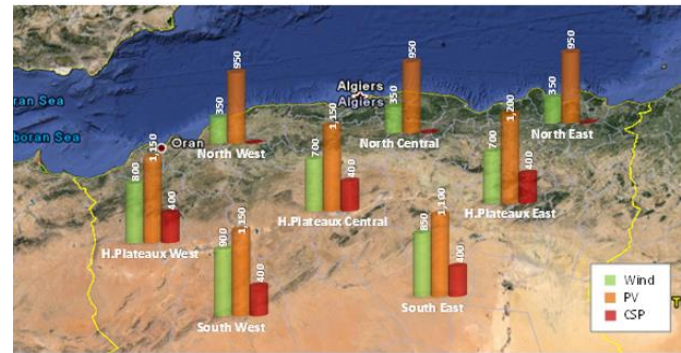


Provide an **assessment of the maximum amount of non-dispatchable renewable generation** that is possible to install in Algeria, ensuring the **reliability, integrity and efficiency of the power system**.

2020



2030



Now on going: Kenya

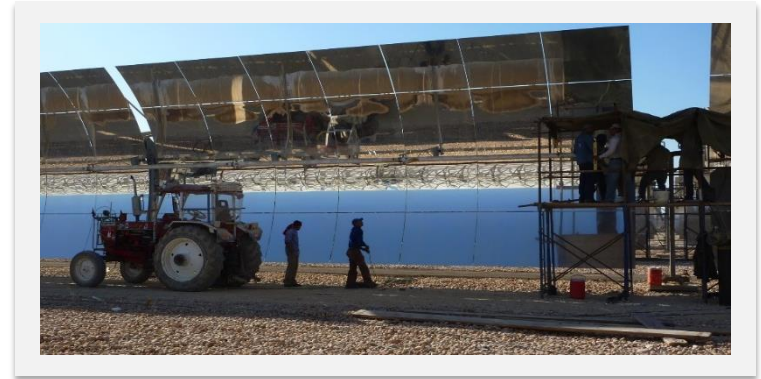
"Job creation and local content"

Objective:

To support **MED countries** in the development of an **ideal local workforce to stimulate job creation and local jobs** for future renewable energy project development.

Content of the study:

1. Global **analysis of job creation** in RE sector;
2. Presentation of the **skills needs** in RE project;
3. Study Case : job creation on wind project development;
4. **Country focus** : presentation of the **current workforce and recommendations**.



On going: Tunisia

Next: Algeria

"Key factors for successful renewable energy auction" (ongoing)

Auction schemes considered as a successful free-market support scheme by governments to **attract competition-based RE investments through low prices.**

Objective:

To support Mediterranean countries in **structuring the tenders adapted to their contexts and attractive to foreign investors.**

Content of the study:

1. General presentation of the tender development framework;
2. **Analysis of the country's tender;**
3. Expert opinion and **recommendations.**

On going: Tunisia and Algeria



"Kenya charcoal sustainability study" (ongoing)

in collaboration with



The prevalence of charcoal in Africa and especially in Kenya is linked to its **massive use for cooking**. At the same time, charcoal production causes serious environmental issues.

The goal of this study is to **propose alternative solutions in order to help Kenya in exploiting its biomass resources in a more sustainable way.**

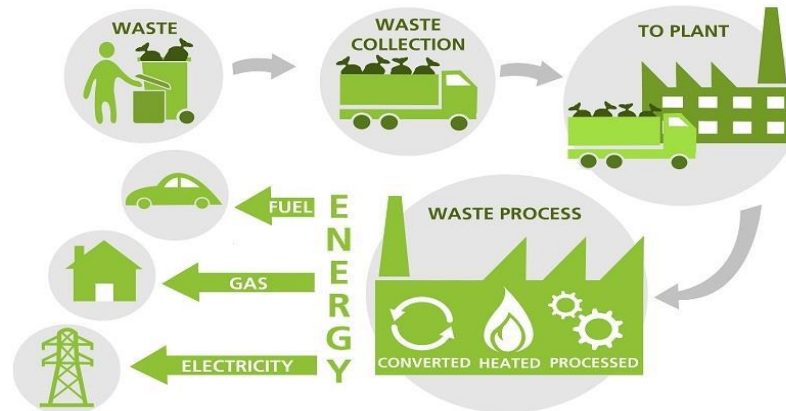


"Waste to energy" (ongoing)

in collaboration with



The study aims to **propose effective solutions for a sustainable business** and how fiscal and policy instruments could support this development, while remaining cost efficient and contributing to decarbonisation of the primary energy mix.



"Deploying renewable energy in Africa: What does it take?"

in collaboration with



POLITECNICO
DI MILANO



POLITECNICO
DI TORINO



At the **Africa Program Launch** conference in Nairobi October 2016 and **G7 Energy Ministerial Side Event**, RES4Africa in collaboration with 12 partners prepared a study based on **8 Position Papers/Fact sheets**, tackling the key issues for a sustainable development of renewables in sub-Saharan Africa.

Available on RES4Africa website



"Beyond energy approach for sustainable deployment in Africa"

in collaboration with



In the framework of the G7 Energy Ministerial Meeting, RES4Africa proposed the **white paper on minigrids** which aims at promoting "action" on the urgent need to develop **innovative and unconventional business models** that leverage the advancement of new technologies to unleash Africa's untapped potential.

Available on RES4Africa website



Strategic Recommendations

Deploying Renewable Energy in the MED: a call for joint public-private effort

Recommendations from the private sector
presented during the **MED Dialogue 3.12.2016** conference.

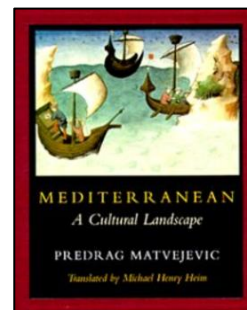
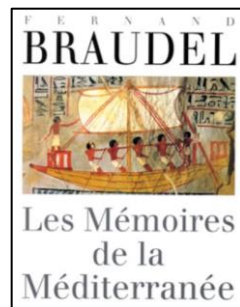


Communiqué to G7 Energy Ministerial Side event 9 April 2017

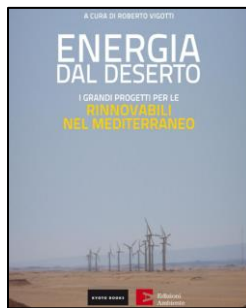
Key recommendations to G7 Energy Ministers by Enel Foundation, RES4Africa and the Africa-EU Energy Partnership (AEEP).

TAKE AWAY

It all started with a **vision...**



and was implemented through **competence, dedication, inclusiveness, passion...**



and...above all...

It was feasible only thanks to my super staff!



Adragna



Aresti



Bellaroto



Detoc



D'Ovidio



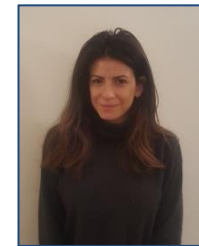
Frullani



Guardo



Marena



Pezzano



Prelevic



Rovzar



Sparaci



Vadrucci

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