

# **Renewable Energy Sources: Legal Aspects of the development and the integration in the Network of Greece**

*Dirk Reinhardt / St.Ex. Heidelberg / Lawyer at the Areopag in Athens  
Partner MStR Law*

*Eva Keki / LL.M. Bonn / Lawyer at the First Instance Court in Athens  
Associate MStR Law*



Law

## MStR Law Firm

### LEGAL ADVISOR FOR ENERGY AND ENVIROMENT

- ❖ Legal Studies
- ❖ LOIs, MOUs, MOAs
- ❖ Legal due diligence of projects and companies. Support in the negotiations
- ❖ Transfer of projects, M&A
- ❖ Contracts for project development, EPC, O&A
- ❖ Energy savings. ESCO companies. Contracts
- ❖ Filing complaints–appeals with RAE, Ministries, Regions, HEDNO, IPTO, HEMO, PPC, etc.

# Introduction

## ❖ General Part

- From FIT to FIP

## ❖ Specific Part

- Pilot tender, Energy Storage/Hybrid Stations, Net Metering, Energy Communities

# European Energy goals for 2020 and 2030

Goals	2020	2030
Emission reduction	20%	40%
Increase of energy efficiency	20%	27%
Share of RES in total consumption	20%	27%

# European Directives

- ❖ Total Energy Consumption of Buildings / Final Energy Savings / Energy Services

*Directives 2002/91/EC, 2006/32/EC, 2010/31/EU, 2012/27/EU*

- ❖ RES Energy Production / Cogeneration of Heat and Power

*Directives 2011/77/EC, 2004/8/EC, 2009/28/EC*

# Energy Goals in Greece for 2020

Goals	2020
Primary Energy Efficiency	20%
RES in Final Energy Consumption	20%
RES in Final Energy Consumption of electric power	40%
RES in Final Energy Consumption of heating and cooling	20%
RES in Final Energy Consumption in transport	20%

# GOALS FOR RES TECHNOLOGIES

RES TECHNOLOGY	MW	MW
	until 2014	until 2020
Hydro-Power	3700	4.650
Small Hydro-Power (0-15 MW)	300	350
Big Hydro-Power (>15 MW)	3.400	4.300
Photovoltaic (PV)	1.500	2.200
Farmers	500	750
Other	1.000	1.450
Solar Thermal Energy	120	250
Wind Power	4.000	7.500
Biomass	200	350

# Support of RES

- ❖ Law 3468/2006
- ❖ Feed-in Tariff System
- ❖ Distinction by technology, installed capacity and locality
- ❖ Guaranteed absorption of electric power
- ❖ Power Procurement Agreement
- ❖ Charge to consumer
- ❖ Special roof program



# RES Licenses

## ❖ Plants with license procedure

(condition for grid connection)

- Production license from RAE
- Installation License  
(including Environmental License and Building Permissions)
- Operation License

❖ Grid Connection

❖ Public Power Agreement

## ❖ Plants released from license procedure

(direct grid connection through net operator)

# Feed-in Tariffs Law 4254/2014

No	RES technology	Without investment aid (€/MWh)	With investment aid (€/MWh)
1	Wind energy ≤ 5 MW	105	85
2	Wind energy > 5 MW	105	82
3	Wind energy on non-interconnected islands	110	90
4	Small hydro-power ≤ 1 MW	105	85
5	Small hydro-power 1-5 MW	105	83
6	Small hydro-power 5-15 MW	100	80
7	Concentrated solar power without storage	260	200
8	Concentrated solar power with storage	280	220
9	Low enthalpy geothermal energy	143	130
10	High enthalpy geothermal energy	110	100
11	Biomass energy ≤ 1 MW	198	180
12	Biomass energy 1 -5 MW	170	155
13	Biomass energy > 5 MW	148	135
14	Landfill/sewage gas ≤ 2 MW	131	114
15	Landfill/sewage gas > 2 MW	108	94
16	Biogas ≤ 3 MW	230	209
17	Biogas > 3 MW	209	190
18	Other RES	90	80
19-28	HECHP with natural gas (various categories)	61+AP until 92+AP	57+AP until 80+AP
29	Other HECHP in the interconnected system	85	80
30	Other HECHP on non-interconnected islands	95	90

# Feed-in Tariffs PV Law 3734/2009

## Feed-in Tariff Photovoltaic (Law 3734/2009)

Type of photovoltaic system	Feed-in tariff
$P < 10$ kWp (Special PV Roof Program)	105 € / MWh
$P \leq 100$ kWp (Interconnected system)	$1,2 \times ASMP_{n-1}$
$P > 100$ kWp (Interconnected system)	$1,1 \times ASMP_{n-1}$
Non-interconnected islands	$1,1 \times ASMP_{n-1}$

# From FIT to FTP

- ❖ New Deal Law 4254/2014
- ❖ Law 4414/2016, *New Support Regime for RES and HECHP*
  - Sliding FIP
  - Competitive tenders
  - Registration with HEMO and IPTO
  - Transmission Period

# Prices, Values, Premiums

- ❖ Monthly Support taking into consideration
  - reference value
  - special market price
  - FiP
  - Special Premium
- ❖ Excluded small projects
- ❖ Special Roof Program
- ❖ PV < 500 KW
- ❖ Non Interconnected Islands
- ❖ Investment incentives

# Law 4414/2016 REFERENCE VALUES

No	RES technology	Reference Values (€/MWh)
1	Wind energy onshore	98
2	Wind energy onshore on non-interconnected islands	98
3	Small hydro-power ≤ 3 MWe	100
4	Small hydro-power 3-15 MWe	97
5	Biomass energy (combustion, pyrolysis) ≤ 1 MW	184
6	Biomass energy (gasification) ≤ 1 MW	193
7	Biomass energy 1 - ≤ 5 MW	162
8	Biomass energy > 5 MW	140
9	Landfill/sewage gas ≤ 2 MW	129
10	Landfill/sewage gas > 2 MW	106
11	Biogas ≤ 3 MW	225
12	Biogas > 3 MW	204
13	Concentrated solar power without storage	257
14	Concentrated solar power with storage	278
15	Geothermal energy ≤ 5MWe	139
16	Geothermal energy > 5 MWe	108
17	Other RES	90
18-27	HECHP with natural gas (various categories)	61+AP until 92+AP
28	Other HECHP	85

# Specific Part

- ❖ Pilot tender procedure
- ❖ Energy Storage/Hybrid Stations
- ❖ Net Metering
- ❖ Energy Communities

# Pilot tender procedure (Art. 7 par. 8 L. 4414/2016)

- ❖ The pilot tender took place on 12 December 2016
- ❖ Total capacity of 40 MW, only for solar PV projects
- ❖ Two categories:
  - plants with a maximum capacity of 1 MW each, total tendered capacity of 4,8 MW
  - plants with a minimum capacity of 1 MW, total tendered capacity of 35,2 MW
- ❖ Grid Connection Agreement in force or a Final Grid Connection Offer in force and submission of the letter of guarantee provided in Law 4152/2013 or Law 4062/2012



# Energy Storage/Hybrid Stations

- ❖ Definition of Hybrid Station: Art. 1 par. 25 L. 3468/2006 → combination of RES units with energy storage systems
  
- ❖ License procedure according to Art.6 L. 3468/2006
  
- ❖ Art. 21 L. 4414/2016, Tariffs for Hybrid Stations from 1.1.2016:
  - Tariff for the electricity from the RES units: Reference tariffs of Art. 4 L. 4414/2016
  - Tariff for the electricity from the power control units: Reference tariff plus 50%

## ❖ Tilos project: license from RAE in 2016

- Innovative hybrid system consists of wind and PV stations with a total capacity of about 1MW and modern NaNiCl<sub>2</sub> batteries with a storage capacity of 2,4MWh.
- Ministerial Decision ΑΠΕΗΛ/Φ1/οικ. 185028/18.12.2015

## ❖ Vehicle to maximize RES integration in the electricity production

## ❖ Improvement of the institutional framework of energy storage

# Net Metering

- ❖ Art. 14A of L. 3468/2006 and L. 4203/2013
- ❖ Self-consumption of PV:  
Ministerial Decision ΑΠΕΗΛ/Α/Φ1/οικ. 24461/31.12.2014
- ❖ Art. 13 of L. 4414/2016
- ❖ Improvement of the legal framework with Ministerial Decision ΑΠΕΗΛ/Α/Φ1/ οικ. 175067/19.04.2017
  - Virtual net metering
  - Offsetting, not annually but every three years
  - Increase of limit in the NII : 300 kWp for Crete and 100 kWp for the rest Non Interconnected Islands

# Energy Communities

- ❖ The aim is to encourage local communities to be engaged in energy production projects
- ❖ Local Link
- ❖ Production, storage , self-consumption, distribution and supply of energy, energy efficiency improvement etc.
- ❖ Financial incentives and simplification of the license procedure
- ❖ Mainly non-profit, under conditions can be profitable

# Thank you for your attention!

Dirk Reinhardt / St.Ex. Heidelberg / Lawyer at the Areopag in Athens  
Partner MStR Law

Eva Keki / LL.M. Bonn / Lawyer at the First Instance Court in Athens  
Associate MStR Law

MICHELIS | STRONGYLAKI | REINHARDT  
[www.mstr-law.gr](http://www.mstr-law.gr) ♦ 23 Sina street, Athens, 10680  
T: 210-3634417, 210-3390308 F: 210-3636791 e-mail: [info@mstr-law.gr](mailto:info@mstr-law.gr)