



PPC Renewables Brief Company Profile

- PPC Renewables S.A., founded in 1998, is a wholly-owned subsidiary of PPC S.A. The company commenced its autonomous operation in 2007 after spinning-off the Renewable Sector from Public Power Corporation
- The company's present portfolio of installed capacity equals to 152,6 MW
- PPC Renewables is among the leading companies in Greek RES market, continuing thus the legacy of PPC S.A. which has been the incumbent company in national RES Industry, since 1982

PPC Renewables Strategic Advantages **Fully Diversified Portfolio of RES Projects**

Subsidiary of the Leading Energy Group in Greece

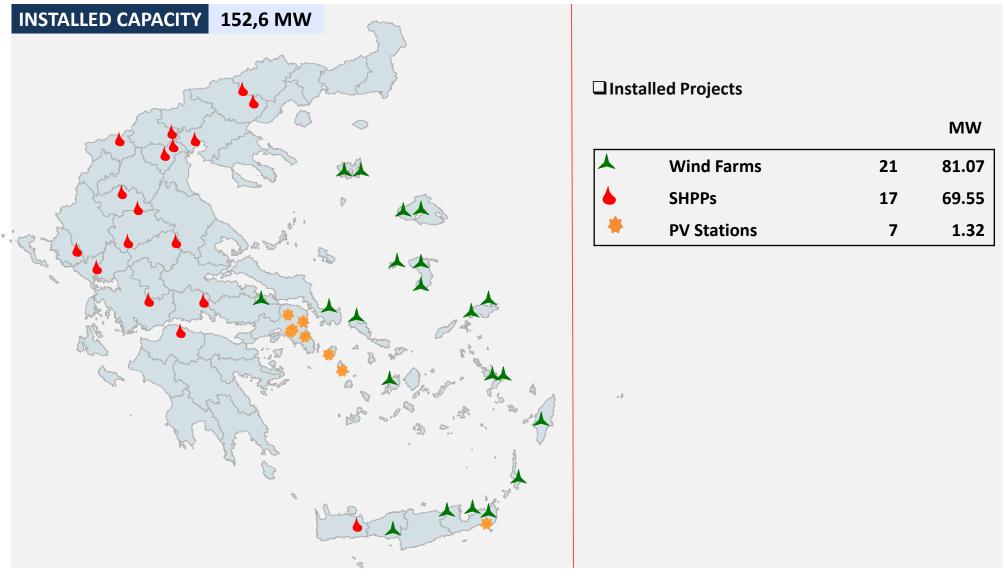
Extroversion via meaningful collaborations



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PPC Renewables

Brief Company Profile - Installed Capacity of Projects





PPC Renewables Brief Company Profile - Financial Figures

	2015	2014	Δ%
SHARE CAPITAL	€ 150.7 mil.	€ 150.5 mil.	0,11%
REVENUES	€ 28.2 mil.	€ 25.0 mil.	12,8%
EBITDA	€ 21.2 mil.	€ 15.7 mil.	<i>35,03%</i>
EBT	€ 16.6 mil.	€ 9.4 mil.	76,6%
NET PROFIT	€ 10.6 mil.	€ 6.9 mil.	53,62%

*Amounts in mil. Euro



PPC Renewables

Company Profile - Strategic Partnerships

Strategic Partnerships with leading Energy & Construction Groups of Private Sector

EDF Energies Nouvelles	Projects already operating: 38MW Plans for additional joint Projects
Rokas Iberdrola Renewables Group	Projects already operating: 8.2MW
MEK Energy S.A.	Projects already operating: 4.1MW Projects under development: 15MW
NAMKO Energy S.A.	Projects already operating: 4.2MW
TERNA Energy S.A.	Projects already operating: 6.6MW Projects under development: 15.8MW
ELTECH S.A.	Projects already operating: 4.9MW
PLATINA PARTNERS Ltd	Projects under development: 119.6MW







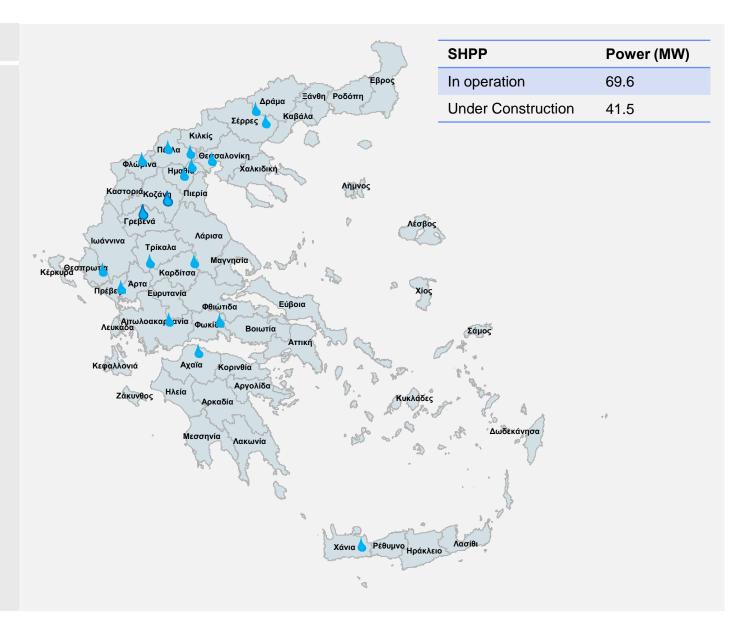
Small Hydro Power Plants Department

June 2016

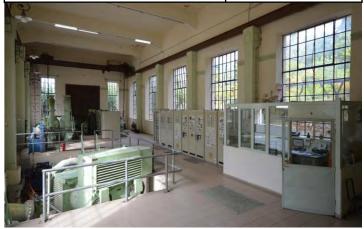


Small Hydro Power Plants (SHPP) in operation 17

- ✓ SHPP Glafkos
- ✓ SHPP Stratos II
- ✓ SHPP Louros
- ✓ SHPP Gitani
- ✓ SHPP Alatopetra
- ✓ SHPP Vorino
- ✓ SHPP Eleousa
- ✓ SHPP Agia Varvara
- ✓ SHPP Vermio
- ✓ SHPP Makrochori
- ✓ SHPP Ilariona
- ✓ SHPP Smokovo
- ✓ SHPP Agios Ioannis
- ✓ SHPP Oinousa
- ✓ SHPP Almiros
- ✓ SHPP Giona
- ✓ SHPP Papadia



SHPP GLAFKOS		
INSTALLED POWER CAPACITY	3,7 (1,3+2,4) MW	
ANNUAL POWER GENERATION	11 GWh	
TURBINE	1 PELTON + 1 FRANCIS	



SHPP LOUROS		
INSTALLED POWER CAPACITY	10,3 (2x2,5 +1x5,3) MW	
ANNUAL POWER GENERATION	44,3 GWh	
TURBINE	3 FRANCIS	



SHPP STRATOS II		
INSTALLED POWER CAPACITY	6,3 (2 x 3,15) MW	
ANNUAL POWER GENERATION	11 GWh	
TURBINE	2 KAPLAN (S-TYPE)	



SHPP GITANI		
INSTALLED POWER CAPACITY	4,2 (2x2,1) MW	
ANNUAL POWER GENERATION	14,4 GWh	
TURBINE	2 KAPLAN (S-TYPE)	



SHPP ALATOPETRA		
INSTALLED POWER CAPACITY	5,1 (3,5+1,6) MW	
ANNUAL POWER GENERATION	14,3 GWh	
TURBINE	1 PELTON + 1 FRANCIS	



SHPP ELEOUSA		
INSTALLED POWER CAPACITY	6,6 (2x3,3) MW	
ANNUAL POWER GENERATION	29,7 GWh	
TURBINE	2 KAPLAN (S-TYPE)	



SHPP VORINO			
INSTALLED POWER CAPACITY	4,1 MW		
ANNUAL POWER GENERATION	25,1 GWh		
TURBINE	1 PELTON		

SHPP AGIA VARVARA		
INSTALLED POWER CAPACITY	0,9 MW	
ANNUAL POWER GENERATION	4,5 GWh	
TURBINE	1 KAPLAN (S-TYPE)	



SHPP VERMIO		
INSTALLED POWER CAPACITY	0,7 (1,8) MW	
ANNUAL POWER GENERATION	4,84 GWh	
TURBINE	1 (2) FRANCIS	



SHPP ILARIONAS		
INSTALLED POWER CAPACITY	4,2 MW	
ANNUAL POWER GENERATION	22 GWh	
TURBINE	1 FRANCIS	



SHPP MAKROCHORI		
INSTALLED POWER CAPACITY	10,8 (3x3,6) MW	
ANNUAL POWER GENERATION	38,94 GWh	
TURBINE	3 KAPLAN (S-TYPE)	



SHPP SMOKOVO		
INSTALLED POWER CAPACITY	10,4 (7,1+3,3) MW	
ANNUAL POWER GENERATION	10,9 (17,7) GWh	
TURBINE	2 FRANCIS	



SHPP AGIOS IOANNIS	
INSTALLED POWER CAPACITY	0,35 MW
ANNUAL POWER GENERATION	1 GWh
TURBINE	1 FRANCIS



SHPP ALMIROS		
INSTALLED POWER CAPACITY	0,3 MW	
ANNUAL POWER GENERATION	0,6 GWh	
TURBINE	1 FRANCIS	



SHPP OINOUSA		
INSTALLED POWER CAPACITY	1,5 MW	
ANNUAL POWER GENERATION	3,85 GWh	
TURBINE	1 PELTON	



SHPP GIONA	
INSTALLED POWER CAPACITY	8,5 MW
ANNUAL POWER GENERATION	38 GWh
TURBINE	1 FRANCIS



SHPP PAPADIA	
INSTALLED POWER CAPACITY	0,5 MW
ANNUAL POWER GENERATION	2,3 GWh
TURBINE	1 PELTON



Total Power Production of 2015 : 184.7 GWh

SHPP's under development - construction

HPP IKARIA	
INSTALLED POWER CAPACITY	6.85 MW
POWER GENERATION PREDICTION	9.81 GWh
CAPEX	47.58 €x1000

SHPP MAKROCHORI II	
INSTALLED POWER CAPACITY	4,9 (2 x 2,45) MW
POWER GENERATION PREDICTION	9.8 GWh
CAPEX	6.9 €x1000

SHPP SMOKOVO II	
INSTALLED POWER CAPACITY	3,2 (2 x 1,6) MW
POWER GENERATION PREDICTION	5.4 GWh
CAPEX	4.55 €x1000

SHPP LOUROS	
INSTALLED POWER CAPACITY	8.84 MW
POWER GENERATION PREDICTION	46 GWh
CAPEX	6.4 €x1000

SHPP VERMIO	
INSTALLED POWER CAPACITY	1.8 MW
POWER GENERATION PREDICTION	6 GWh
CAPEX	3.2 €x1000

SHPP LADONA		
INSTALLED POWER CAPACITY	10 MW	
POWER GENERATION PREDICTION	25 GWh	
CAPEX	12.74 €x1000	

SHPP KALAMA		
INSTALLED POWER CAPACITY	5.8 MW	
POWER GENERATION PREDICTION	19 GWh	
CAPEX	9.31 €x1000	

Negotiations for new SHPP development in cooperation with the private sector



Hybrid Power Station of Ikaria

Hybrid Power Station of Ikaria		
Power Capacity (MW)	6,85	
Annual Power Production (MWh)	9.810	
Capacity Factor	16,35%	
Total Investment (mil. €)	47,50	
Construction progress	85%	
End of Construction	End of 2017	



The Hybrid Power Station of Ikaria consists of:

- Two SHPP of 1,05 MW and 3,1 MW power capacity
- Wind farm of 2,7 MW power capacity
- ❖ Two water reservoirs of 80.000 m³ each
- Pump station of 12 pumps of 250 Kw each

Project Importance

- ✓ Evolutionary project all over Europe
- ✓ Efficient combination and exploitation of the overflow of the existing Pezi dam and storage of wind energy
- ✓ Annual CO₂ emissions savings of about 13.800 tons





Past PPCR activities in Albania

Implemented actions of SHPP Dpt of PPCR S.A until 2010

Between Janury 2009 and February 2010 PPCR implemented a number of site visits and meetings all over the country.

A number of potential sites were identified both for small and large Hydro Plants.

Since 2010 no further actions occurred.





Conclusions – proposals of SHPP Dept. of PPCR S.A.

Investments in HPPs or/and SHPPs in Albania are very advantageous due to the important hydraulic potential

Construction Cost is very low (until 2010) compared to the respective European Union ones



