Job creation and renewables:PV in urban environment (IRESUD) and biomass in rural Southern **Cone (Fundacion Bariloche** study). **Roque Pedace** 

#### TABLE 7

#### Economic activity by energy-related sector

Figures are percentages of total jobs for each sector

Energy source	Extraction	Agriculture	Manufacturing	Construction	Utilities	Trade	Transport	Independent admin/ professional
Fossil fuels								
Oil and natural gas	14.6	0.4	13.9	2.4	11.3	6.6	13.1	37.5
Coal	41.6	0.3	13.1	0.9	7.8	5.9	6.8	23.6
Energy efficiency								
Building retrofits	0.5	1.4	13.6	61.5	0.1	7.9	2.5	12.4
Mass transit/freight rail	0.3	0.6	7.8	21.7	0.1	4.4	54.4	10.7
Smart grid	0.4	0.6	38.1	15.7	0.2	6.3	2.8	35.9
Renewables								
Wind	0.6	0.9	47.4	20.3	0.2	7.1	3.7	19.8





Source	Туре	Estimate	Notes
UNEP et al. (2008)	G <b>ross employment</b>	Solar: 6.3m Wind:2.1m Biofuel: up to 12m	Global scope
Greenpeace (2009)	Gross employment, direct	All Energy Sector: 8.6 m Renewable Energy: 2.7 m	Global scope, based on IEA 2007 forecast, business as usual
		All Energy Sector: 11.3 m Renewable Energy: 6.9 m	Global scope, 30% renewable electricity target
Ragwitz et al. (2009)	Gross employment, direct and indirect	All Renewables: 1.8 m All Renewables: 2.3 m All Renewables: 3,4 m	EU, based on no policies EU, current policy, moderate exports EU, advanced po <mark>li</mark> cy, moderate exports
	Net employment direct and indirect	All Renewables: 0.2 m All Renewables: 0.5 m All Renewables: 0.3 m All Renewables: 0.7 m	EU, current policy, moderate exports EU, advanced policy, moderate exports EU, current policy, high exports EU, advanced policy, high exports

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FITS 2010 – Solar Energy – Project 008 **PV Systems Interconnection to Electricity Grid in Urban Environment**.

 Public Institutions
 Privates Partners

 IRESUD Consortium
 Aldar S.A.

 CNEA – National Commision of Atomic
 Aldar S.A.

 Energy.
 Edenor S.A.

 Solar Energy Department
 Eurotec S.R.L.

 Solar Martin National University)
 Q-Max S.R.L.

 Esc. C&T / GESTEC / Esc. E&N
 Tyco S.A.

#### **Public Institutions**

CNEA – National Commision of Atomic Energy. Solar Energy Department UNSAM (San Martin National University) Esc. C&T / GESTEC / Esc. E&N Aldar S.A. Edenor S.A. Eurotec S.R.L. Q-Max S.R.L. Tyco S.A.

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#### **General Goal**

Promote deployment of technologies for PV integration to the electricity grid in urban and periurban areas.

### **Specific Goals**

- Develop promotion incentives and regulatory framework
- Proof feasibility and operation of pilot systems
  - Public Buildings
  - Private houses
  - > Supply and sell electricity to the grid according to new regulation.
- Systems and components locally developed
- National Laboratories installation in Research institutions.
- Human resources training in firms and institutions



## Capacity building:training buildersand building workers in PV installation (UOCRA)







Final Assessment Report **Bioenergy for Rural Development and Poverty** Alleviation – GNESD Countries Analyzed: Argentina, Chile, Uruguay Paraguay Fundación Bariloche-2010 GNESD GLOBAL NETWORK ON ENERGY FOR

SUSTAINABLE DEVELOPMENT



# Different situations regarding job creation:

High rural unemployment

High rural self-employment

High proportion of temporary wageearning jobs

Range of types of familiar agriculture

Range of migration drivers

### Integration of Rural Dev Goals

- Provide rural regular employment
- Produce community consumption goods with added value in and for the community
- Discourage rural migration
- Bring positive social, environmental and health effects (eg water for irrigation).
- Support rural agro-industry (1.5 M units, 5 M people in LA).
- Boost synergy with non-agricultural economy

### Some conclusions

- Picking the winners make sense when it comes to social and environmental impacts:eg agriculture expansion means more jobs,but could neglect small producers,women and environment....
- Supplying technologies locally means more local jobs, but could delay development or increase risk of failure..
- Productive uses call for integrated rural development policies.

# ....Renewables deserve "good jobs"! thanks