



RURAL CONCESSIONS: THE ARGENTINA EXPERIENCE

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VILLAGE POWER 98 - WB - nrel - 6-8 October WASHINGTON DC

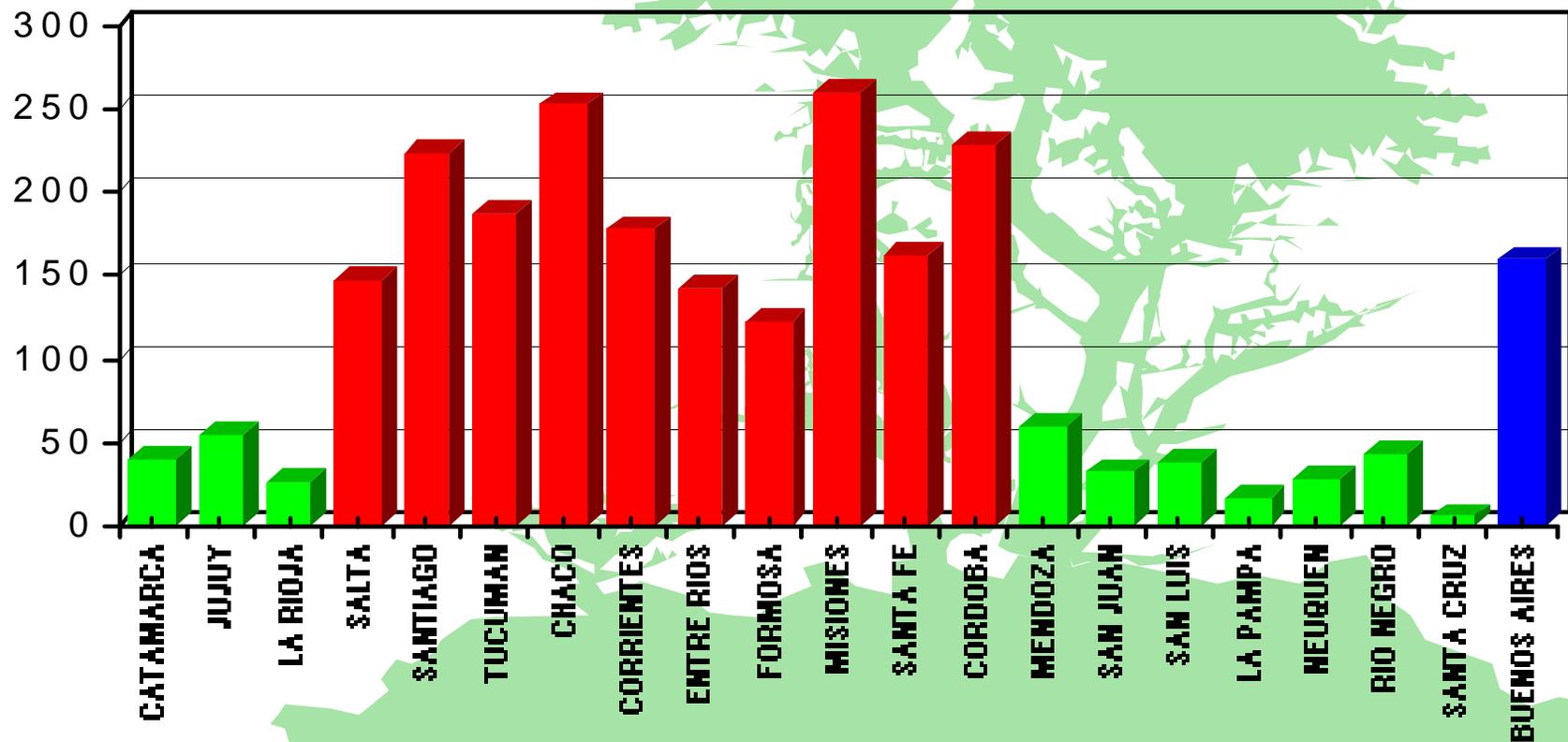
THE PROBLEM/ARGENTINA



- ◆ **Even 92% of the Argentinians have electricity services, around 2,5 and 3 million remain without mainly due geographic dispersion problems.**
- ◆ **Relatively high number of public services with no electricity supply (schools, first aid medical centers, water services, etc.). Nearly 6000.**
- ◆ **Electricity supply by grid extension not feasible due to high extension costs by new incorporated user. A study for Argentina shows mean values of U\$S 8000/user with minimums of U\$S 5000/user and maximum of U\$S 25.000/user.**

DISPERSED RURAL POPULATION WITHOUT ELECTRICITY SERVICES BY STATE (PROVINCE)

(THOUSAND OF INHABITANTS)



DIAGNOSIS



- ◆ **RENEWABLE ENERGY (SOME OF IT , TYPICALLY SHS) TECHNOLOGIES ARE ELECTRICITY SERVICES SUPPLY READY BECAUSE THEY ARE:**
 - **TECHNOLOGICALLY MATURE.**
 - **ECONOMICALLY COMPETITIVE.**
 - **SOCIALLY ACCEPTED.**
- ◆ **THE MAIN DETECTED PROBLEM IS SUSTAINABILITY DUE TO PROGRAMS WITH A STRONG EMPAHSYS IN SOCIAL WELFARE NOT LOOKIN FOR MEDIUM/LONG TERM ISSUES THAT DOES NOT CARE OF:**
- ◆ **MAINTAINANCE AND PARTS REPLACEMENT.**
 - **PEOPLE TECHNICAL TRAINING.**
 - **ECONOMIC SUSTAINABILITY OF SUPPLY.**

ELECTRICITY SUPPLY PROGRAM GOAL AND GUIDELINES (PAEPRA)

- ✦ **PROVIDE MINIMUM ELECTRICITY SERVICES TO DISPERSED RURAL INHABITANTS AND RURAL SERVICES (LIGTHS AND SOCIAL COMMUNICATIONS) USING THE MOST ECONOMIC TECHNOLOGY.**
- ✦ **SHARED RESPONSIBILITY:**
 - **USERS (THEY PAY A TARIFF IN ALL CASES)**
 - **STATE GOVERNEMENTS (THEY USES HIS ELECTRICITY PROMOTION FUND PARTIALLY FOR THE PROGRAM)**
 - **FEDERAL GOVERNMENT (ASIST TO THOSE STATE IN WICH THE LOCAL AVAILABLE FUND ARE NOT SUFICIENT)**
- ✦ **ELECTRICITY SERVICES PROVIDED BY PRIVATE CONCESSIONAIRES WHOSE INCOME IS ENOUGH TO RUN THE BUSINESS UNDER PREVAILING ECONOMIC CONDITIONS IN THE PRIVATE SECTOR.**
- ✦ **TECHNOLOGY FREEDOM OF THE CONCESSIONAIRE BETWEEN SEVERAL OPTIONS IN ORDER THE CHEAPEST ONE BE ELECTED UNDER LIFE CYCLE CRITERIA.**

ELECTRICITY SUPPLY PROGRAM GOALS

- ✦ **REACH WITH ELECTRICITY SERVICES TO 1.400.000 INHABITANTS (315.000 users) and 6000 PUBLIC SERVICES WITH SEVERAL TECHNOLOGIES. MOST OF THIS SERVICES RENEWABLE ENERGY TECHNOLOGIES WILL BE USED.**
- ✦ **MINIMUM TARIFF TO USERS OF ABOUT \$15 A MONTH.**
- ✦ **MINIMUM SERVICES QUALITY IS OF ABOUT 4 KWh/MONTH.**
- ✦ **WORKING POSITIONS IN THE PRIVATE SECTOR ARE CREATED.**

FINANCING

FIVE YEARS PROGRAM

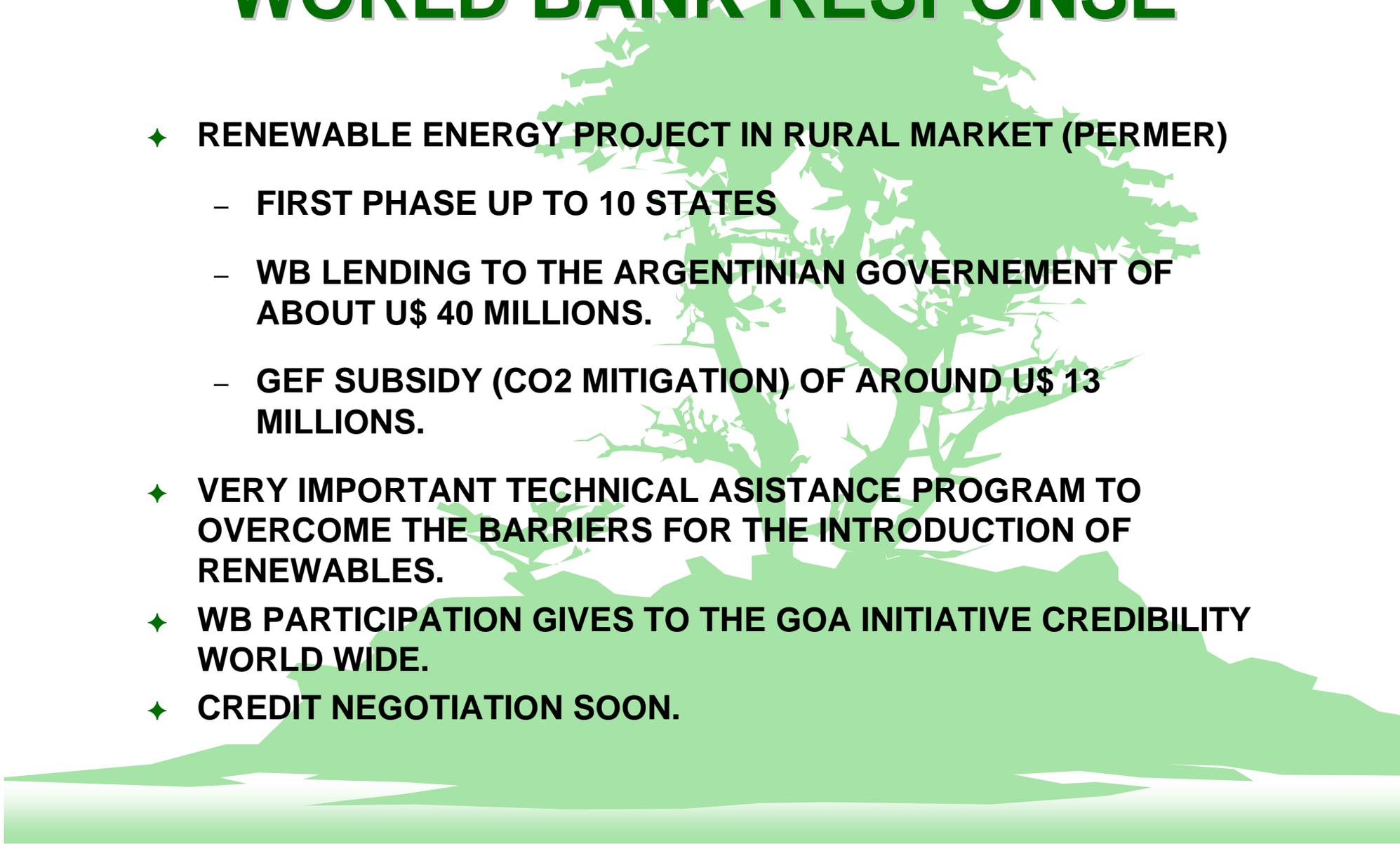
◆ TARIFAS A USUARIOS(1)	\$147.000.000
◆ FONDOS ESPECIALES (2)	\$113.000.000
◆ FONDOS ADICIONALES	<u>\$ 54.000.000</u>

TOTAL **\$314.000.000**

(1) VALOR PRESENTE NETO DE BALANCE DE TARIFAS
(TARIFAS - COSTOS DE O&M) 10% - 20 AÑOS

(2) FONDOS EXISTENTES SECTOR ELECTRICO (FCT)

WORLD BANK RESPONSE



- ◆ **RENEWABLE ENERGY PROJECT IN RURAL MARKET (PERMER)**
 - **FIRST PHASE UP TO 10 STATES**
 - **WB LENDING TO THE ARGENTINIAN GOVERNEMENT OF ABOUT US\$ 40 MILLIONS.**
 - **GEF SUBSIDY (CO2 MITIGATION) OF AROUND US\$ 13 MILLIONS.**
- ◆ **VERY IMPORTANT TECHNICAL ASISTANCE PROGRAM TO OVERCOME THE BARRIERS FOR THE INTRODUCTION OF RENEWABLES.**
- ◆ **WB PARTICIPATION GIVES TO THE GOA INITIATIVE CREDIBILITY WORLD WIDE.**
- ◆ **CREDIT NEGOTIATION SOON.**

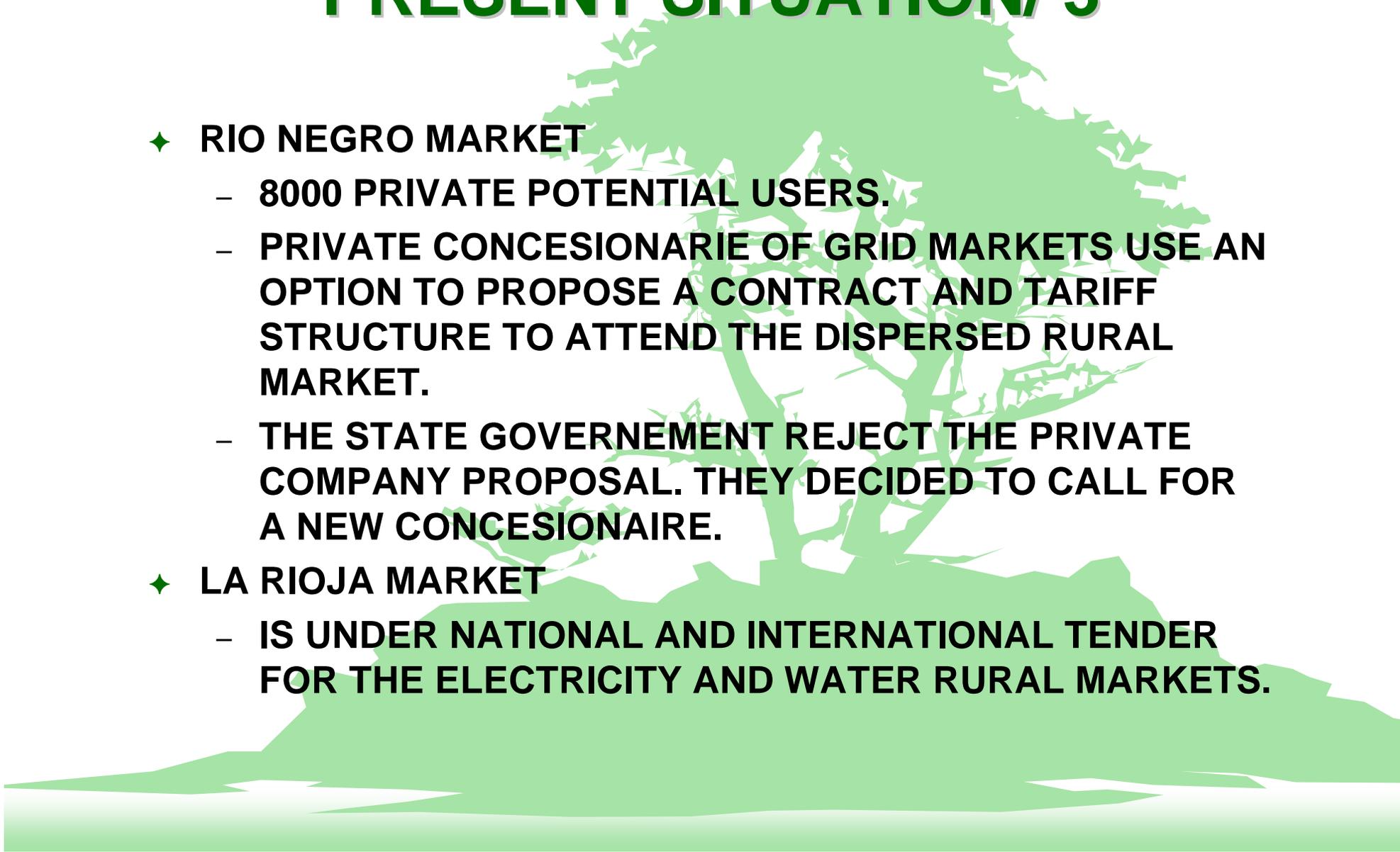
PRESENT SITUATION/ 1

- **DISPERSED MARKET OF SALTA PROVINCE.**
 - **PRIVATE CONCESIONARIE SINCE SEPTEMBER/96.**
 - **18000 POTENTIAL PRIVATE USERS.**
 - **MAXIMUN TARIFF STRUCTURE FIXED.**
 - **NO INITIAL SUBSIDIZATION. AFTER A COUPLE OF YEARS YES.**
 - **BIDDING IN COMBINATION WITH THE CONCENTRATED MARKET WITH CROSS DEFAULT PUNISHMENT.**
 - **WINNER UNION FENOSA & EXCEL GROUP.**
 - **AROUND 130 SCHOOLS UNDER CONSTRUCTION AND 120 ADDITIONAL TO BE COMPLETED BEFORE THE END OF 1998.**

PRESENT SITUATION/ 2

- **DISPERSED MARKET OF JUJUY PROVINCE.**
 - PRIVATE CONCESIONARIE STARTING IN DEC/96.
 - INVESTEMENT GROUP WITH CGE AS OPERATOR.
 - JOIN OFFER WITH CONCENTRATED MARKET ALTHOUGH CLEARLY IDENTIFIED.
 - CROSS DEFAULT STATEMENT
 - 6500 POTENTIAL PRIVATE USERS.
 - 300 PUBLIC SERVICES.
 - THEY IMPROVED SIGNIFICANTLY THE SERVICE QUALITY.
 - 14 SOLAR VILLAGES (2 INITIALLY)
 - 48 SCHOLLS REPOWERED(FROM 50/100 TO 300 Wp)
 - AUTOMATION OF 5 EXISTING MICRO HYDRO.
 - NOW BUYING 600 SHS FOR PRIVATE USERS.

PRESENT SITUATION/ 3



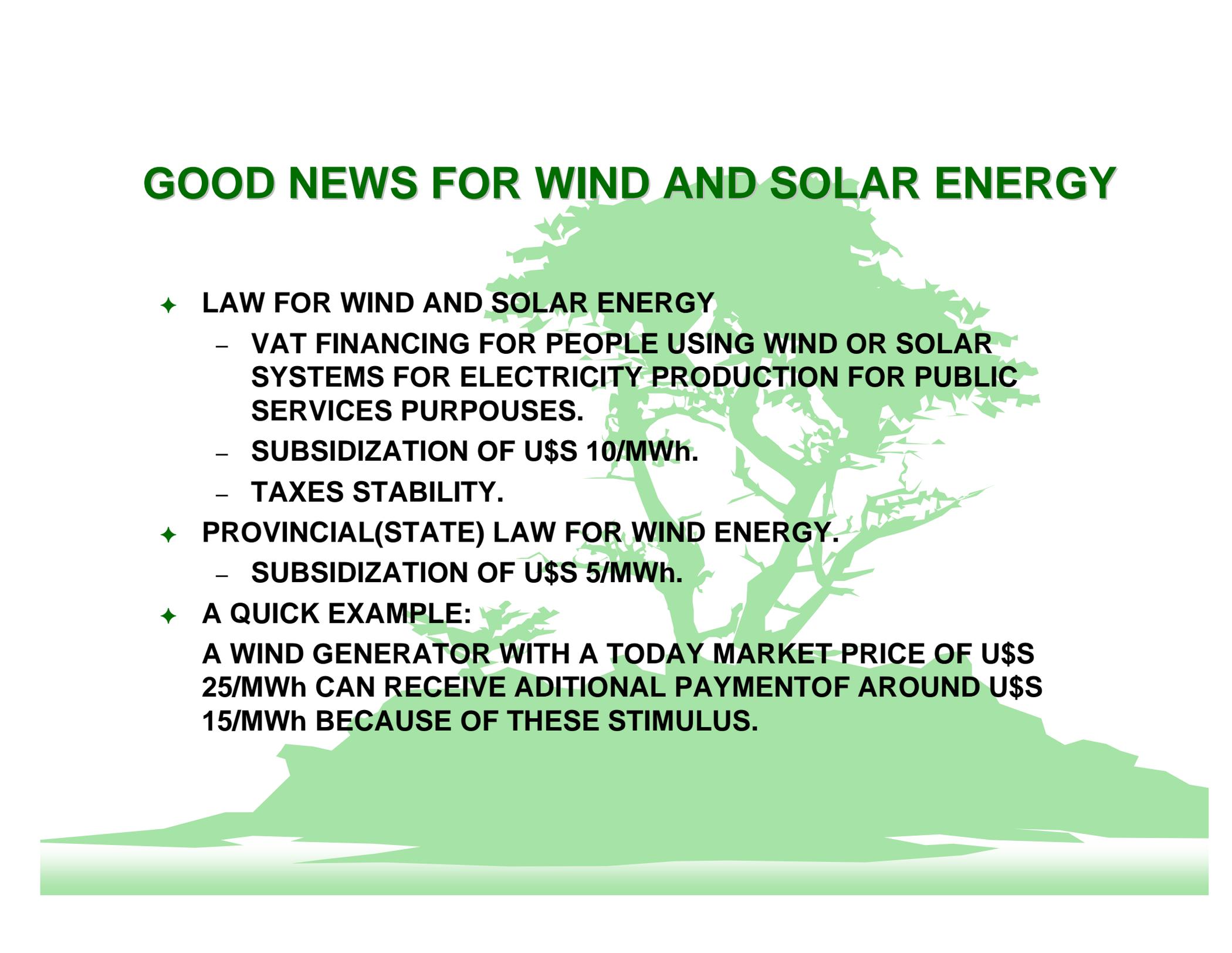
◆ RIO NEGRO MARKET

- 8000 PRIVATE POTENTIAL USERS.**
- PRIVATE CONCESIONARIE OF GRID MARKETS USE AN OPTION TO PROPOSE A CONTRACT AND TARIFF STRUCTURE TO ATTEND THE DISPERSED RURAL MARKET.**
- THE STATE GOVERNEMENT REJECT THE PRIVATE COMPANY PROPOSAL. THEY DECIDED TO CALL FOR A NEW CONCESIONAIRE.**

◆ LA RIOJA MARKET

- IS UNDER NATIONAL AND INTERNATIONAL TENDER FOR THE ELECTRICITY AND WATER RURAL MARKETS.**

GOOD NEWS FOR WIND AND SOLAR ENERGY



◆ LAW FOR WIND AND SOLAR ENERGY

- VAT FINANCING FOR PEOPLE USING WIND OR SOLAR SYSTEMS FOR ELECTRICITY PRODUCTION FOR PUBLIC SERVICES PURPOSES.
- SUBSIDIZATION OF U\$S 10/MWh.
- TAXES STABILITY.

◆ PROVINCIAL(STATE) LAW FOR WIND ENERGY.

- SUBSIDIZATION OF U\$S 5/MWh.

◆ A QUICK EXAMPLE:

A WIND GENERATOR WITH A TODAY MARKET PRICE OF U\$S 25/MWh CAN RECEIVE ADITIONAL PAYMENTOF AROUND U\$S 15/MWh BECAUSE OF THESE STIMULUS.

CREDITS



- ◆ **DOE-NREL-NRECA**
- ◆ **ASEA-AWEA**
- ◆ **WINROCK - E Co**
- ◆ **UNDP**
- ◆ **EC - THERMIE B - ICAEN - MADRID UNI - ISE**
- ◆ **FRANCE COOPERATION:WORLD BUSINESS/TRANSENERGIE.**
- ◆ **GEF**
- ◆ **WORLD BANK**



FOR INFORMATION

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<http://www.mecon.ar/energia/energia.htm>

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