



POLICIES FOR CLOSING DOWN NUCLEAR POWER PLANTS. A SPANISH REVIEW

Mr. Gabriel A. RUÍZ DEL OLMO

Mayor of Almonacid de Zorita, Guadalajara, Spain

President of AMAC, Group of Municipalities with NPP in Spain

I will try to give a brief description of the nuclear situation in Spain and the role of the AMAC (Spanish Group of Municipalities Affected by NPPs) since its establishment in 1988.

1. NPPs IN SPAIN.

The application of nuclear energy for peaceful purposes began in Spain in the 1950s with the creation of the Nuclear Energy Board, which set out the framework within which this new sort of energy could be used. At the end of this decade began the construction of the first nuclear plant to produce electricity and in 1972, three NNPs were already working: José Cabrera, Santa María de Garoña and Vandellòs I.

In the 70s, this development of the nuclear industry continued with the construction of the following plants: Almaraz I, II, Ascó I, II, Lemóniz I, II and Cofrentes. As you know, since 1982, there was a moratorium in the building of Lemóniz I and II due to terrorism. From 1979 onwards began the building of Trillo I, Vandellòs II, Valdecaballeros I, II and Trillo II.

Currently, there are 9 nuclear reactors in Spain in seven sites, and there is a reactor that is being dismantled after the accident that took place in Vandellòs I in 1989. Nuclear energy contributes to the national network in 39,3% of gross production.

Graph 1.- Nuclear Power Plants in Spain

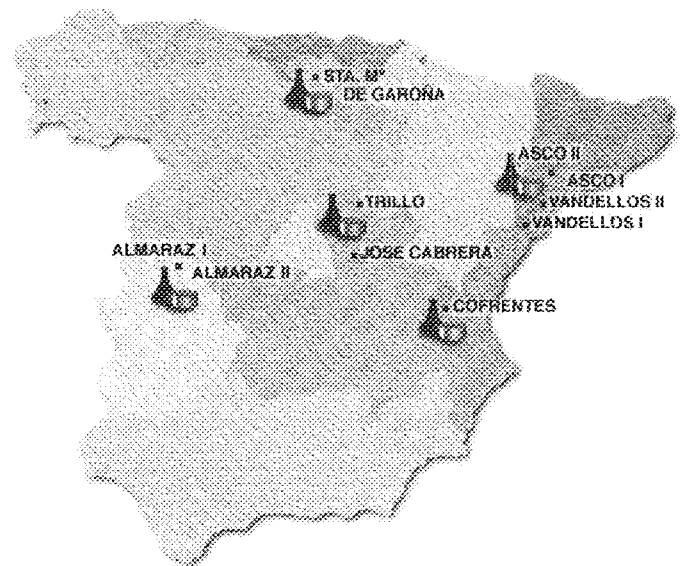
NPPs	COMPANIES	CURRENT ELECTRIC NET POWER (Mw)	TYPE OF REACTOR	YEAR FUNCTIONING
José Cabrera	100% Unión Fenosa	153	PWR (Westinghouse)	1969
Almonacid de Zorita (Guadalajara)				
S. M. Garoña	50% Iberdrola	446	BWR (General Electric)	1971
Vale Tobalina (Burgos)	50% Endesa			
Almaraz I y II	52,6% Iberdrola	943,5	PWR (Westinghouse)	1983
Almaraz (Cáceres)	36 % Cia Sevillana de E	952,6		1984
	11,2% Unión Fenosa			
Ascó I				
Ascó (Tarragona)	60 % Fecsa	949	PWR (Westinghouse)	1984
	40 % Endesa			
Ascó II	45 % Fecsa	946,2	PWR (Westinghouse)	1986
	40 % Endesa			
	15% Iberdrola			
Cofrentes	100% Iberdrola	990,4	BWR (General Electric)	1985
Cofrentes (Valencia)				
Trillo I	48 % Iberdrola	1000	PWR	1988
	34,5% U. Fenosa			
	2% Nudenor			
Vandellòs II	72% Endesa	966	PWR (Westinghouse)	1988
Vandellòs (Tarragona)	28 % Iberdrola			

2. WHY WAS AMAC CREATED?

The economic situation in Spain is very complex and diverse. The city councils affected by NPPs decided to group together and deal together with all the matters that arise.

Graph 2 -- AMAC Areas

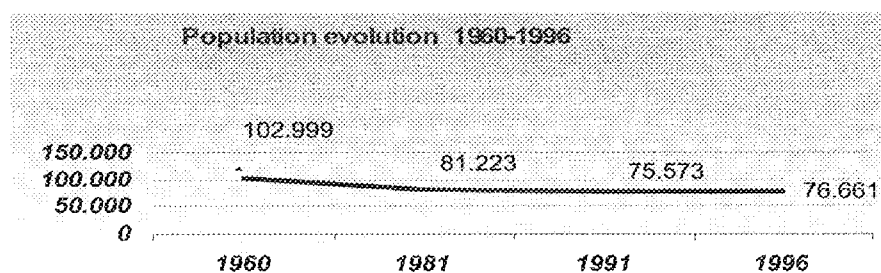
Total population: 78.155 inhabitants
- José Cabrera (Guadalajara): 6.930
- Trillo (Guadalajara): 8.493
- Almaraz (Cáceres): 5.043
- Ascó (Tarragona): 20.590
- Vandellós (Tarragona): 6.660
- Garoña (Burgos): 6.917
- Cofrentes (Valencia): 23.522



AMAC is neither against or in favour of nuclear energy. AMAC is against the problems that arise as a result of the state's decision to establish NPPs in certain areas. AMAC's main aims are the following:

- to guarantee the safety of those living in villages with nuclear energy
- to ensure that the emergency nuclear plans are effective
- to work on harmonious and balanced policies of economic development, backed up with compensation that would actually make up for the potential dangers that we face.
- to create open and transparent information channels to learn about the daily functioning of NPPs.

Graph 3.- Evolution of the population in the AMAC municipalities (1960-96)



Source: National Institute of Statistics

Graph 4.- Economic Activity Rates 1991.

	AMAC Areas	Municipalities < 2.000 inhabitants	Municipalities < 10.000 inhabitants
ECONOMIC ACTIVITIES 1991			
Agriculture	19,7%	34,5%	27,3%
Industry	28,5%	20,0%	22,8%
Construction	13,3%	13,5%	14,3%
Services	38,5%	32,0%	35,6%

Source: National Institute of Statistics

The main objectives of AMAC are:

- Security
- Economic development
- Transparency

Graph 5.- Grade of implementation of the emergency plans in each area

	Investment (Million PTAs)	Degree of implementation
Almaraz	2.420	40%
Ascó	3.636	40%
Cofrentes	2.071	75%
Garofña	2.336	50%
Trillo	1.238	95%
Vandellós	2.984	40%
Zorita	2.629	70%

Source: AMAC

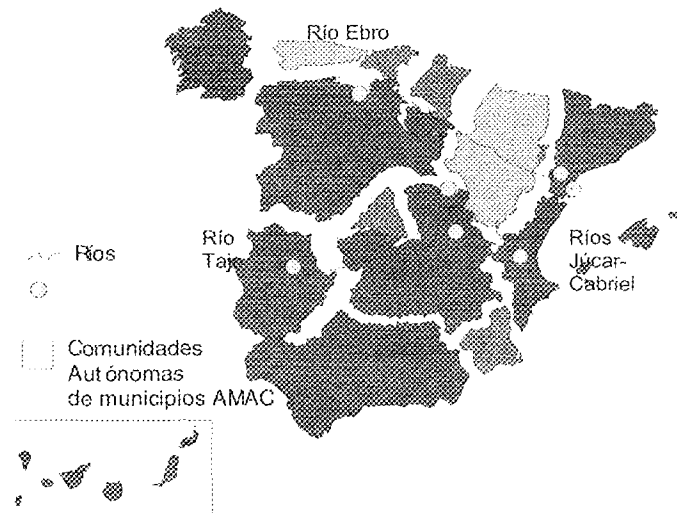
3. INSTITUTIONAL RELATIONS OF AMAC

AMAC continuously works to consolidate the institutional relations, mainly with regular meetings with parliamentary groups, deputies in the Parliament and the Senate, with the Autonomous Communities as well and other related authorities with respect to nuclear safety (Nuclear Safety Council and Civil Protection).

Our relations with the public authorities are excellent; maybe we do not achieve all the positive results that we want, but we are making progresses and we are consulted in any issue related to the nuclear industry. In particular, we have relations with the regulating authorities, the responsible authorities in nuclear emergency plans, the Government, the political groups and the electric companies.

Graph- Map of Associations created in nuclear areas:

Association of Municipalities for the Economic Development of the Garoña Area
Association of Municipalities of the Trillo Area
Union of Municipalities MIDIT
Union of Municipalities Tajo-Guadiela
Association of Municipalities of the Júcar-Cabriel Valley
Association of Municipalities ARIBOR



4. IMPROVEMENT OF THE QUALITY OF LIFE OF THE POPULATION

Once the construction of a NPP has been completed, there is a disruption of the social fabric, which requires public intervention in order to avoid depopulation due to the unemployed worker emigration. We talk here about workers of the traditional economic sectors: agriculture, cattle raising and crafts.

At this stage, the public intervention is necessary. A NPP employs between 400 and 500 workers on a fixed basis and around 300 temporary workers in the annual maintenance work.

It is therefore necessary to transform the economic structure and create a new economic scenario to promote alternative business sources through strategic, logistic, financial and training activities, to foster investments in the affected municipalities in a joint basis.

5. AMAC AND THE RADIOACTIVE WASTE

General situation

In Spain, there is radioactive waste in those installations where radioactive materials are used or produced for medical, industrial or research purposes and also in those related to the fuel cycle for energy production.

The storage of radioactive waste is not specifically regulated. The only legislative approach is found in the Nuclear Energy Act from 1964 and it involves the same special authorisation procedure as the nuclear plants.

In 1984, the public company ENRESA (National Company for Radioactive Waste, SA) was set up. Its aims are the global management of radioactive waste, including the construction of storage sites, including locating sites, dealing with transport and closure of the plants when appropriate.

Spanish nuclearpower plants (30.06.1998)							
NPPs	OCUPIED CAPACITY	TOTAL CAPACITY	NUCLEUS	REAL	AVAILABLE	OCUPATION	SATURATION
		%	RESERVE	CAPACITY	CAPACITY		YEAR
José Cabrera	208	548	69	479	271	43,42	2.015
Sta.M ^a de Garoña	1.284	1.727	400	1.327	43	96,76	2.015**
Almaraz I	688	1.804	157	1.647	959	41,77	2.021
Almaraz II	616	1.804	157	1.647	1.031	37,4	2.022
Ascó I	580	1.421	157	1.264	684	45,89	2.013
Ascó II	560	1.421	157	1.264	704	44,3	2.015
Cofrentes*	1.956	4.186	624	3.562	1.606	54,91	2.009
VandelósII	456	1.594	157	1.437	981	31,73	2.020
Tiilo	436	805	177	628	192	69,43	2.001
TOTAL	6784	15310	2.055	13255	6471	51,18	
*Storage capacity of the NPP							
of Cofrentes once he extension of the authorised pool is completed							
**Resolution of the D.G.E from -August 7, 1997							