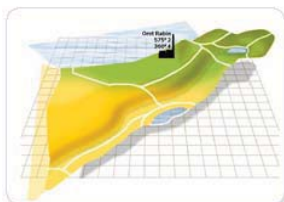


<b>Project Name:</b>	Rutenberg Units 1+2 (Rutenberg "A")			
	<b>Synchronization Date:</b> November 1991			
<b>Main Project Data:</b>				
<b>Project Type:</b>		Pulverized bituminous sub-critical coal fired units.		
<b>Project Size:</b>		575 MW at nominal continues rate		
<b>Fuels:</b>	Main	Coal		
	Secondary:	Oil grade no. 6		
	Start-up fuel:	Oil Grade no.2		
<b>Location:</b>		near southern Ashkelon town along the Mediterranean Sea shore in Israel.		
<b>Main Project Parameters:</b>				
	<b>Steam Cycle:</b>	Sub critical		
	<b>Main Steam Capacity:</b>	1700 ton/hr		
	<b>Main Steam Pressure</b>	175 ata		
	<b>Main Steam Temperature:</b>	535 °C		
	<b>Reheat Steam Pressure</b>	40 ata		
	<b>Reheat Steam Temperature:</b>	535 °C		
	<b>Feed water Temperature</b>	252 °C		
	<b>Cooling media:</b>	Sea water		
	<b>Frequency:</b>	50 Hz		
	<b>Electrical energy supply at:</b>	6.9 kV/0.4 kV		
<b>Environmental Data:</b>				
	<b>Emission</b>	<b>Actual Value</b>	<b>Retrofit Value (stage I)</b>	<b>Retrofit Value (stage II)</b>
	SO <sub>x</sub> [mg/dNm <sup>3</sup> @ 6% O <sub>2</sub> ]:	2200	200 (with FGD)	200
	NO <sub>x</sub> [mg/dNm <sup>3</sup> @ 6% O <sub>2</sub> ]:	850	600 (with PM)	200 (with SCR)
	Particle Mater [mg/dNm <sup>3</sup> @ 6% O <sub>2</sub> ]:	50	30	30
	CO [mg/dNm <sup>3</sup> @ 6% O <sub>2</sub> ]:	250	250	250
	ESP+SO <sub>3</sub>			
<b>Environmental Features:</b>				
<b>Low NO<sub>x</sub>:</b>	scheduled to 2010			
<b>FGD:</b>	scheduled to 2011			
<b>SCR:</b>	scheduled to 2016			
<b>Project Organization:</b>				
	<b>Equipment Bids Number:</b>	248		
	<b>Construction Bids Number:</b>	449		
<b>Main equipment manufacturers:</b>				
<b>Equipment</b>	<b>Manufacturer</b>	<b>Equipment</b>	<b>Manufacturer</b>	<b>Equipment</b>
<b>Turbine:</b>	MAN	<b>Generator</b>	<Insert Data>	<b>Boiler:</b>
				Combustion Engineering (CE)
<b>Fans:</b>	T.L.T Babcock	<b>Feed Water Pumps:</b>	Pacific Pumps	<b>FGD</b>
				-----
<b>Condenser</b>	Southwestern Engineering	<b>Main Transformers</b>	General Electric +Elco	<b>Main Control System:</b>
				Bailey controls
<b>ESP</b>	Combustion Engineering	<b>Dearator</b>	Ecodyne Graver	<b>Fly Ash handling/ extraction</b>
				Moeller/ Redler
<b>By Products:</b>				
cement quality dry fly ash, road filling quality botto m ash wetted by drinking water.				
<b>Engineering Projects Group Scope of Work: Engineering Procurement Construction Management (EPCM)</b>				

<b>Project Name:</b>		Rutenberg Units 3+4 ( <b>Rutenberg "B"</b> )	
<b>Synchronization Date:</b>		February 2001	
<b>Main Project Data:</b>			
<b>Project Type:</b>		Pulverized bituminous sub-critical coal fired units	
<b>Project Size:</b>		550 MW at nominal continues rate	
<b>Fuels:</b>	Main	Coal	

		Secondary:	Oil grade no. 6		
		Start-up fuel:	Oil Grade no.2		
	Location:	near southern Ashkelon town along the Mediterranean Sea shore in Israel			
Main Project Parameters:					
	Steam Cycle:	Sub critical			
	Main Steam Capacity:	1550 ton/hr			
	Main Steam Pressure	169 ata			
	Main Steam Temperature:	538 °C			
	Reheat Steam Pressure	38.5 ata			
	Reheat Steam Temperature:	538 °C			
	Feed water Temperature	250 °C			
	Cooling media:	Sea water			
	Frequency:	50 Hz			
	Electrical energy supply at:	6.9 kV/0.4 kV			
Environmental Data:					
	Emission	Actual Value	Retrofit Value		
	SO <sub>x</sub>	200	200		
	[mg/dNm <sup>3</sup> @ 6% O <sub>2</sub> ]:				
	NO <sub>x</sub>	550 (with PM)	200 (with SCR)		
	[mg/dNm <sup>3</sup> @ 6% O <sub>2</sub> ]:				
	Particle Mater	50	30		
	[mg/dNm <sup>3</sup> @ 6% O <sub>2</sub> ]:				
	CO <sub>2</sub>	250	250		
	[mg/dNm <sup>3</sup> @ 6% O <sub>2</sub> ]:				
	Low NO <sub>x</sub> Burners +ESP+FGD				
Environmental Features:					
Provisions:	SCR				
SO <sub>3</sub> FGC:	scheduled to 2012				
SCR:	scheduled to 2013				
Project Organization:					
	Equipment Bids Number:	7816			
	Construction Bids Number:	223			
Main equipment manufacturers:					
Equipment	Manufacturer	Equipment	Manufacturer	Equipment	Manufacturer
Turbine:	Alstom Power	Generator:	Alstom Power	Boiler:	Babcock & Wilcox
Fans:	T.L.T Babcock	Feed Water Pumps:	MitsubishiHeavy Industries	FGD	Lurgi Lentjes Bischoff
Condenser	Alstom Heat Exchangers (DELAS)	Main Transformers:	Elco	Main Control System:	Baily (USA)
ESP	Lodge Cottrell	Dearator	Stork	Fly Ash handling	Cifa Progetti
By Products:					
Wall board quality gypsu m, cement quality dry fly ash, road filling quality botto m ash wetted by drinking water					
Engineering Projects Group Scope of Work:Engineering Procurement Construction Management (EPCM)					



<b>Project Name:</b> OROT RABIN Units 1-4 (MD "A")					
<b>Synchronization Date:</b> April 1984					
<b>Main Project Data:</b>					
<b>Project Type:</b>	Pulverized bituminous sub-critical coal fire units				
<b>Project Size:</b>	360 MW at nominal continues rate				
<b>Fuels:</b>	Main: Coal				
	Secondary: Oil grade no. 6				
	Start-up fuel: Oil Grade no.2				
<b>Location:</b>	Close to northern Hadera town along the Mediterranean Sea shore in Israel				
<b>Main Project Parameters:</b>					
<b>Steam Cycle:</b>	Sub critical				
<b>Main Steam Capacity:</b>	1107 ton/hr				
<b>Main Steam Pressure</b>	137 ata				
<b>Main Steam Temperature:</b>	537.8 °C				
<b>Reheat Steam Pressure</b>	32.46 ata				
<b>Reheat Steam Temperature:</b>	537.8 °C				
<b>Feed water Temperature</b>	242 °C				
<b>Cooling media:</b>	Sea water				
<b>Frequency:</b>	50 Hz				
<b>Electrical energy supply at:</b>	6.9 kV/0.4 kV				
<b>Environmental Data:</b>					
<b>Emission</b>	<b>Actual Value</b>	<b>Retrofit Value (stage I)</b>	<b>Retrofit Value (stage II)</b>		
SO <sub>x</sub> [mg/dNm <sup>3</sup> @ 6% O <sub>2</sub> ]:	2200	200 (with FGD)	200		
NO <sub>x</sub> [mg/dNm <sup>3</sup> @ 6% O <sub>2</sub> ]:	1350	650 (with PM)	200 (with SCR)		
Particle Mater [mg/dNm <sup>3</sup> @ 6% O <sub>2</sub> ]:	50	30	30		
CO <sub>2</sub> [mg/dNm <sup>3</sup> @ 6% O <sub>2</sub> ]:	250	-	-		
<b>Environmental Features:</b> ESP+SO <sub>3</sub> FGC					
<b>Low NO<sub>x</sub>:</b> scheduled to 2010					
<b>FGD:</b> scheduled to 2013					
<b>SCR:</b> scheduled to 2016					
<b>Project Organization:</b>					
<b>Equipment Bids Number:</b>		~300			
<b>Construction Bids Number:</b>		350			
<b>Main equipment manufacturers:</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Equipment</b>	<b>Manufacturer</b>		
<b>Turbine:</b>	General Electric (GE)	<b>Generator</b>	Westinghouse /GE	<b>Boiler:</b>	Babcock & Wilcox
<b>Fans:</b>	T.L.T Babcock	<b>Feed Water Pumps:</b>	Pacific Pumps	<b>FGD</b>	-----
<b>Condenser</b>	Senior	<b>Main Transformers</b>	General Electric	<b>Main Control System:</b>	L&N
<b>ESP</b>	Babcock & Wilcox	<b>Dearator</b>	Graver	<b>Fly Ash handling/ extraction</b>	UCC
<b>By Products:</b> Cement quality dry fly ash, road filling quality botto m ash wetted by sea water					
<b>Engineering Projects Group Scope of Work: Engineering Procurement Construction Management (EPCM)</b>					