

THE PBG GROUP

EXTRACT FROM THE RESTRUCTURING PLAN

OF RAFAKO S.A. W RESTRUKTURYZACJI (IN RESTRUCTURING) of Racibórz, Poland

CONTAINING ELEMENTS

OF THE NEW STRATEGY AND THREE FINANCIAL SCENARIOS

I. Proposed future strategy for running the RAFAKO business

1. Going back to the roots

The new strategy for the RAFAKO business refers to the Company's historical roots and projects for which RAFAKO has impressive credentials, high level of specialisation and proven expertise. The overriding objective of the Company's new strategy is to continue as a going concern and achieve financial stabilisation. Given that the Company's complete power generation units and flue gas denitrification (SCR) systems have made the greatest losses, while upgrades of steam generators and steam generator components as well as wet and semi-dry flue gas desulfurisation (FGD) units have generated the highest profits, it is RAFAKO's ambition to focus on its Steam Generator Plant (ZPK) and on EPC projects of a lower value and lower risks, i.e. upgrade and delivery of environmental protection systems, where the Company has repeatedly confirmed its extensive expertise and competence.



The Company intends to focus on manufacturing activities based on the potential of its Steam Generator Plant and on service activities centred around the integrated division of power and environmental protection facilities. These measures will be accompanied by substantial efforts to cut personnel and non-personnel costs, while adjusting the scale of operations to the current market situation.

2. Key elements of RAFAKO's new strategy

- Moving away from large EPC contracts and focusing on upgrade of steam generators/steam generator components and delivery of environmental protection systems;
- Taking full advantage of the potential of the Steam Generator Plant;
- Focusing on the profitability and margins on contracts, with less focus on revenue growth;
- Selective bidding for contracts in the Polish oil and gas industry;
- Downscaling of operations and focusing on profitable specialisation;
- Adjusting the cost base to the prevailing market situation and scale of operations;
- Divesting itself of excessive or redundant assets and adjusting the assets held to current market needs.

As part of the restructuring programme, we have identified a number of measures related to RAFAKO's processes and organisational structure that will be taken to improve the control of risks and margins on future projects. Key changes in this respect will include: streamlining the organisational structure, ensuring that all relevant stakeholders participate in bid preparation, improving project management relying on the existing process methodology, and improving risk management and reporting at all levels of the organisation.

3. Elements of the external environment

Financing of coal-based generation projects is expected to be significantly curtailed, but coal-fired plants will probably remain in operation for many years to come. The global output of energy from coal will remain relatively stable, while the use of alternative energy sources in Poland will be growing. Demand for energy is estimated to rise by approximately 1% per year. Despite the growing demand for energy generation, coal as a generation fuel will gradually be replaced by RES.

According to forecasts, the number of large CAPEX projects involving conventional coal-fired boilers will be falling sharply, albeit routine maintenance work on such boilers will be continued. Existing boilers need to be serviced (overhauled, repaired and upgraded) on a regular basis. The expenditure incurred on maintenance and repair of a typical coal-fired boiler accounts for approximately 60% of the total expenditure made in the course of the boiler's life. Upgrades are usually combined with major overhauls so as to minimise the necessary downtime.

lynek obsługi kotłów	Częstotliwość	Średni wydatek elektrowni		
"Remont coroczny" (czyszczenie i drobne naprawy)	Co ~1 rok PLN ~1-2M			
"Remont średni"	Co ~3-5 lat	PLN ~3-7M		
"Remont główny"	Co ~10-15 lat	PLN ~6-15M		
Modernizacja (często łączona z remontem głównym)	W zależności od potrzeby zmiany parametrów	PLN ~20-60M		
Zakup nowego kotła	Co ~30-40 lat	PLN ~110M		

The boiler maintenance market is divided into several segments, by type of repair work.

The general contractor work in upgrade projects and supply of parts for boiler repairs appear to be the optimum segments for RAFAKO to currently participate in. The complexity of such work requires altering the design and reconstructing a boiler, which can rarely be done by companies which do not specialise in boiler manufacture. According to the current strategy for the coming years, RAFAKO is

	Projekty remontów i modernizacji	Częstotliwość	Średni wydatek elektrowni (M PLN)	Potencjalny udział Rafako w projektach	Historyczna marża Rafako	
Rynek remontów	"Remont coroczny" (czyszczenie i drobne naprawy)	Co ~1 rok	Co ~1 rok ~1-2		N/A	
	(1) "Remont średni" "Remont główny"	Co ~3-5 lat	~3-7		~10-20%	
		Co ~10-15 lat	~6-15	~30-50%		
Rynek modernizacji	2 Modernizacja (często łączona z remontem głównym)	W zależności od potrzeby zmiany parametrów	~20-60	~100%	~20-40%	
Przykład dla średnie	go kotła węglowego o ~200t/h (mocy	~100-200MW)		RRF <i>AKD</i>		

to act as a general contractor in upgrade projects and a supplier of parts for major overhauls and medium repairs of boiler units.

At present, approximately 70 major overhauls and medium repairs are planned to be made per year. Given that the market of major overhauls is dominated by typical construction and assembly companies, RAFAKO could participate in that market primarily as a subcontractor or supplier of parts. It should be added that approximately 30-50% of the expenditure on a major overhaul project is the cost of pressurised components, which the Company can manufacture at its Steam Generator Plant.

3.1 Market of boiler upgrades

The market of boiler upgrades offers the following opportunities:

- upgrade, with the existing fuel unchanged;
- conversion into another fuel;
- upgrade of existing coal-fired boilers to raise their parameters to current flexibility standards (e.g.: 200+ scheme);
- conversion of an existing coal-fired boiler into another fuel.

Based on a number of information sources, it is estimated that two to five boiler upgrades, worth between PLN 20m and PLN 60m, are carried out in Poland every year. The estimated total value of the market of boiler upgrades and parts, which is the optimum market for RAFAKO according to its strategy, is approximately PLN 300m per year.

3.2 200+ scheme

The 200+ scheme is highly attractive for the Company's business. Up to 30–40 upgrade projects could be carried out by RAFAKO under the scheme.

Scheme assumptions:

Developing new technical solutions to upgrade 200 MW power generating units for successful participation in the power capacity market.

Commercial rationale:

- reduction of start-up time (from 9 to 5 hours, when started from a cold condition);
- increase in ramp-up (from 2-3 Mwe/min to 9 Mwe/min);
- better adjustment to the needs of the power capacity market and support in case of limited RES availability;

- additional pollutant reduction systems required under BAT conclusions (boron, mercury);
- improvement of I&C systems.



Market potential in Poland

3.3 Recent boiler upgrade projects carried out on the Polish market

Historically, RAFAKO's contracts related to maintenance of existing utility steam generators were a stable source of operating margin, accounting on average for approximately 20% of the total. Most new steam generators planned to be brought on stream in the coming years will be CCGT units. The share of CCGT units in the power generation market will be gradually growing. Their presence is vital for the operational security of the national power system, as they are sufficiently flexible to meet the more stringent RES balancing requirements.

Projekty modernizacyjne na rynku Polskim z ostatnich lat										
Obiekt Mo	dernizacja	Data								
Rozpoczęte/ zakończone modernizacje										
Elektrownia Bełchatów	Modernizacja OPP w 5 kotlach Projekt Rafako	2016								
Elektrownia Turów	Zwiększenie mocy osiągalnej jednostek wytwórczych z 235 MW do 250 MW oraz podniesienie ich sprawności	2017								
Elektrownia Kozienice	Modernizacja układu wody chłodzącej, turbozespołu, napędów wentylatorów spalin	2019								
Elektrociepłownia Mielec	Automatyzacja układu pompowego	2019								
Elektrownia Jaworzno	Pilotażowa modernizacja Rafako 200+ 🖌 Projekt Rafako	2020								
Elektrociepłownia Poznań-Karolin	Zamiana paliwa z oleju opałowego ciężkiego na olej opałowy lekki w kotłach wodnych	2020								
Elektrownia Polaniec	Podniesienie mocy znamionowej oraz podwyższenie sprawności wytwarzania energii elektrycznej	2020								
	Planowane modernizacje									
Elektrownia Konin	Przebudowa kotła energetycznego na kocioł fluidalny opalany biomasą	2021								
Elektrociepłownia Legnica	Modernizacja kotłów energetycznych numer 1 i 2	2021-2023								
Elektrociepłownia Poznań-Karolin	Modernizacja ~2-3 kotłów – zmiana paliwa	2021-2025								
Elektrociepłownia Łódź	Modernizacja ~2-3 kotłów – zmiana paliwa	2021-2025								

3.4 Market of incineration plants

220 million tonnes of waste are produced in Europe every year, with the volume rising slightly over the recent years. Poland alone produces 15 million tonnes of municipal waste. Currently, there are eight municipal waste incineration plants in Poland, and the market of boilers for that industry is fragmented. RAFAKO has one but large reference facility, located in Szczecin. The share of municipal waste incinerated at such plants is expected to gradually increase to 30% of total waste produced, which means that 10–20 new incineration plants, worth PLN 0.7–2bn in aggregate, would appear on the market.



Currently, there are about 500 waste incineration plants in Europe, of which almost a half are located in Germany and France. RAFAKO could further expand its subcontracting segment by participating in upgrade projects on incineration plants abroad, especially in Germany, taking advantage of the business contacts of the Steam Generator Plant.

As most municipal waste incineration plants in Germany were built before 1989, significant expenditure is expected to be made on their modernisation.

3.5 Environmental protection segment

The environmental protection segment comprises three main products for four key customer groups.



The need to meet the regulatory requirements in environmental protection (BAT conclusions) is the main driver of the market growth. In April 2017, BAT conclusions were adopted for combustion plants, imposing restrictive emission limits.

Deadlines for complying with BAT conclusions:



Historically, RAFAKO's FGD Plant generated relatively high ratios of successful tenders. The ongoing and planned contracts will be gradually reducing the market of new FGD units for large power plants in Poland. The main growth segments in the coming years will be the market of FGD systems for smaller generating units and the market of wastewater treatment for power plants.

Rynek	Potencjał (# instalacji)	Śr. wartość instalacji (PLN M)	Potencjał rynku (PLN M)	Przykłady niedawnych ofert lub instalacji					
Odsiarczanie spalin w elektro-ciepłowniach i ciepłowniach 5-100MW	~50-80 (estymacja, uwzględniająca także większe ciepłownie)	~5-50	~1,300-2,000 (przy średniej cenie PLN 25M)	Ell. KielceRadpec Radom					
Oczyszczanie ścieków w elektrowniach	~5-6 Duże elektrownie ze starszymi systemami odsiarczania	~50-100	~250-600	 El. Łaziska El. Bełchatów (przetarg odwołany) El. Opole (przetarg wstrzymany) El. Puławy (budowana instalacja z systemem no-liquid) El. Połaniec (wykonane w 2019) 					
Instalacje usuwania rtęci	~4-5	5-10	~20-50						
Instalacje usuwania boru	Podobne do liczby oczyszczalni ścieków	50-60	~250-300	Elektrownia Opole					
Razem			~1,800-3,000						

Potential of the environmental protection market

7

The highest profitability has historically been and still is recorded for RAFAKO-manufactured flue gas desulfurisation (FGD) units, while its catalytic flue gas denitrification (SCR) systems have, historically, adversely affected RAFAKO's margin; therefore, the Company plans to strongly limit or suspend bidding in the latter segment going forward.

3.6 Oil and gas market

The oil and gas market consists of seven main segments: terminals, gas compressor stations, gas pipelines, gas and oil storage facilities, oil pipelines, oil and gas production facilities, and petrochemical plants. Players active in the Polish oil and gas market have ambitious investment plans for the coming years.

RAFAKO has the capacity to participate in numerous segments of the market, but gas pipelines, storage facilities and compressor stations are of key interest given the Company's experience.

Opportunities:

- PBG's experience and credentials from the construction of the Świnoujście terminal;
- RAFAKO's own credentials gained after completion of the construction project in Kędzierzyn;
- Experience and credentials from the completed construction of the Goleniów-Płoty gas pipeline.

Challenges (risks):

- Projects requiring significant financial security;
- Projects requiring partnerships and specific skills for complex construction work;
- Specialist approach required;
- Strong competition.

Following the transfer of credentials from PBG, and having gained its own credentials following the completion of ongoing projects, RAFAKO will be able to actively penetrate the oil and gas investment market.

4. Estimated market of contracts awarded to RAFAKO

The value of contracts awarded to RAFAKO is estimated to reach approximately PLN 848m in 2026.



Assumptions for estimating the value of contracts awarded

	Obszar	2020	2021	2022	2023	2024	2025	2026	(2025)	Założenia
				(PLN M)					(% rynku PL)	
	Remonty i modernizacje kotłów (en. zawod.)	9	77	86	86	86	86	36	~30%	 Modernizacje 200+: ~1 projekt rocznie ~PLN 50 M zaczynając od 2021 Stopniowe zwiększenie udziałów w rynku dostarczania części do remontów głównych i średnich do ~20% w 2022; wielkość rynku na stałym poziomie ~PLN 180 M Zmniejszenie rynku remontów i modernizacji od 2026 ze względu na stopniowe wygaszanie energetyki węglowej
otłowe	Nowe obiekty energ. zawodowej	0	0	0	50	50	50	100	~5%	 Konserwatywne założenie wzrostu w sektorze kotlów odzysknicowych po odbudowaniu kompetencji w tym obszarze (skupienie na projektowaniu całego układu lub zakup licencji)
elementy k	Ciepłownictwo	0	30	30	90	90	90	120	~15%	 Rozwój rynku wymiany kotłów nieefektywnych (2020: ~PLN 200 M - 2025: ~PLN 600 M) Udział w rynku wygranych kontraktów: ~5% (2020) do ~15% (2023) przy odpowiednio intensywnej działalności sprzedażowej już od 2021
Kotły i	Termiczne przetw. Odpadów	0	30	60	60	60	60	70	~20%	 2021: wygrany ~1 przetarg na "mniejszy" (PLN 30 M) kontrakt dostarczenia kotła do termicznej utylizacji odpadów; 2022-2025: dostarczania ~1 "większego" (PLN 60 M) lub ~2 "mniejszych" kotłów
	Energetyka przemysłowa	7	38	52	52	52	52	52	~25%	 Wzrost udziału w rynku dostarczania nowych kotłów (2021: ~15%, 2022: ~25%) Wzrost udziału w rynku modernizacji kotłów przemysłowych (2020: ~20%, 2022: ~30%) Wzrost udziału w rynku dostarczania części do remontów kotłów przemysłowych (2020: ~15%, 2022: ~30%)
Ocl	nrona środowiska	30	170	170	120	150	200	100	~35%	 "Małe" instalacje DeSOX (5-100 MW) ~PLN 10 M; 2020: ~5 wygranych kontraktów rocznie, 2024: ~10 wygranych kontraktów rocznie ~1-2 wygranych kontraktów rocznie ~PLN 50-100 M oczyszczalni ścieków lub usuwania rtęci oraz boru w większych elektrowniach
Roj	oa i Gaz (scenariusz itralny)	0	75	75	75	75	75	150	~5%	 Scen. pesymistyczny (udziałów w wygr. kontraktów): Wzrost z ~0% w 2020 do ~5% w 2023 Scen. optymistyczny (udziałów w wygr. kontraktów): Wzrost z ~2% w 2020 do ~12% w 2024
Zak Kot	ład Produkcji łów	100	150	165	182	200	220	220	N/A (głównie kl. zagraniczni)	 Stopniowe podniesienie efektywności produkcyjnej zakładu o ~10% w skali roku od 2021¹
Sur	na	146	570	638	715	763	833	848	-	

II. Projected profit or loss in successive years based on three forecasts

Below are presented three forecast scenarios for the next six years:

- base-case scenario based on the new strategy and specific business optimisation measures;
- worst-case scenario assuming that newly acquired orders would be 15% lower relative to the base-case scenario starting from 2022;
- best-case scenario given that the base-case provides for quite significant downscaling of operations, the additional (best-case) scenario assumes that newly acquired orders would be 10% higher relative to the base-case scenario starting from 2022.

1. Base-case scenario

Forecast sales in successive years result from:

- performance of the current order book
- orders that the Company plans to win in the coming years.

No.	Item	2021	2022	2023	2024	2025	2026
1	Revenue	937,801	573,915	638,989	689,450	761,924	797,051
2	Gross profit	70,029	44,272	63,240	76,324	91,548	97,741
3	Operating profit/(loss)	117,413	3,733	20,485	33,569	47,105	53,298
4	Operating profit/(loss) without arrangement gain + depreciation and amortisation (EBITDA)	39,584	15,000	29,557	41,657	54,498	60,691
5	Profit/(loss) before tax	115,070	1,460	18,399	31,671	45 <i>,</i> 395	51,775
6	Net profit/(loss)	110,372	1,183	14,903	25,653	36,770	41,938

Forecast of the statement of profit or loss in the base-case scenario for 2021–2026 (PLN '000)

2. Worst-case scenario

The worst-case scenario assumes that newly acquired orders would be 15% lower relative to the base-case scenario starting from 2022.

No.	ltem	2021	2022	2023	2024	2025	2026
1	Revenue	937,801	541,779	561,263	587,287	647,635	677,493
2	Gross profit	70,029	41,366	55,156	64,785	77,636	82,900
3	Operating profit/(loss)	117,413	1,431	13,076	22,750	33,980	39,259
4	Operating profit/(loss) without arrangement gain + depreciation and amortisation (EBITDA)	39,584	12,698	22,148	30,838	41,373	46,652
5	Profit/(loss) before tax	115,070	-842	10,991	20,852	32,270	37,736
6	Net profit/(loss)	110,372	-682	8,903	16,890	26,138	30,566

Forecast of the statement of profit or loss in the worst-case scenario for 2021–2026 (PLN '000)

3. Best-case scenario

The main assumption of the best-case scenario is that newly acquired orders would be 10% higher relative to the base-case scenario starting from 2022.

Forecast of the statement of profit or loss in the best-case scenario for 2021–2026 (PLN '000)

No.	Item	2021	2022	2023	2024	2025	2026
1	Revenue	937,801	595,339	690,807	757,559	838,117	876,756
2	Gross profit	70,029	46,209	68,629	84,018	100,823	107,635
3	Operating profit/(loss)	117,413	5,268	25,424	40,781	55,855	62,658
4	Operating profit/(loss) without arrangement gain + depreciation and amortisation (EBITDA)	39,584	16,535	34,495	48,869	63,248	70,051
5	Profit/(loss) before tax	115,070	2,995	23,338	38,883	54,145	61,135
6	Net profit/(loss)	110,372	2,426	18,904	31,495	43,857	49,519