

# The Role of the Eco-Industrial Park (EIP) at the National Economy: An Input-Output Analysis on Korea

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**Table S1.** Summary of commercialized projects in the National EIP program of Korea.a

Priority	Ranking	Name of representative product and service technologies
1st	1	Energy optimization using heat of incineration and process
	2	Recovery of valuable metals from process wastewater
	3	Recycling technology for non-ferrous metal scrap
	4	Solid fuel technology using waste wood
	5	Recycling technology of waste acid, alkali, and organic solvents
	6	Extraction of waste synthetic resin into feedstock
	7	Extraction of waste synthetic resin into raw material
	8	Alternative fuel production using oil mist recovery and waste oil
	9	Fertilizer production using by-products of fish and meat processing
	10	Construction material production using slag and ash
2nd	11	Recovery of valuable metals from process wastewater and sludge
	12	Application and extraction of process sludge into raw material
	13	Construction material production using inorganic sludge
	14	Recovery of valuable metals from waste metals
	15	Industrial water production using sewage treatment plant effluent
	16	Recycling technology for ferrous metal scrap
	17	Technology of bio-energy production using organic wastewater and by-products
	18	Extraction of waste synthetic rubber into raw material
	19	Recycling technology for organic by-product in ceramic industry
	20	Production of Industrial gas using by-product gas
3rd	21	Application and extraction of process sludge into raw material (silicon recovery in wastewater)
	22	Solid refuse fuel technology using sludge
	23	Recovery of organic solvent and reclaimed oil from wastewater and sludge
	24	Production of the chemical raw materials using by-product gas
	25	Manufacturing of refractory materials using silicon sludge
	26	Regeneration technology of waste adsorbent
	27	Production of microbial preparation using by-products, such as food processes and probiotics
	28	Fertilizer production using waste refractory materials
	29	Recovery of valuable metals in waste oil
	30	Production of adsorbent using sludge
	31	Fertilizer production using organic sludge
	32	Fuel production using waste wood
	33	Production of reducing agents for steel making using coke particle
	34	Application and extraction of ash into rubber product filler
	35	Application and extraction of process sludge into floor filler
	36	Construction material production using inorganic by-product
	37	Hydrotalcite production using fly ash

**Table S2.** Match of products and services in the commercialized EIP projects with economic sectors.

		SIC code		
		384 sector		30 sector
Name of Representative Product and service technologies	code	name	code	name
Energy optimization using heat of incineration and process	27, 29, 106, 181, 279, 280	Bituminous coal, LNG, diesel oil, industrial boiler and steam generator, gas, steam and hot water	2, 6, 10, 16	Mined and Quarried Products, Coal and Petroleum Products, Metal Products, Electricity, Gas and Steam
Recovery of valuable metals from process wastewater	169, 283	Copper smelting, refining and alloy product, Treatment of sewage, Waste water and night soil(Industrial)	9, 17	Primary Metal Products, Water Supply, Waste and Remediation Service
Recycling technology for non-ferrous metal scrap	170, 171, 173, 285, 286	Aluminum and lead smelting, refining and alloy product, other non-ferrous metal smelting, refining and alloy product, Waste collection transport and treatment (industrial), resource recycling service	9, 17	Primary Metal Products, Water Supply, Waste and Remediation Service
Solid fuel technology using waste wood	27, 106, 285, 286	Bituminous coal, diesel oil, waste collection transport and treatment (industrial), resource recycling service	2, 6, 17	Mined and Quarried Products, Coal and Petroleum Products, Waste and Remediation Service
Recycling technology of waste acid, alkali and organic solvent	115, 117, 286	Other base organic compounds, other inorganic compounds, resource recycling service	7, 17	Chemical Products, Waste and Remediation Service
Extraction of waste synthetic resin into feedstock	27, 29, 85, 88, 106, 285, 286	Bituminous coal, LNG, recycling lumber, other wooden products, diesel oil, waste collection transport and treatment (industrial), resource recycling service	2, 5, 6, 17	Mined and Quarried Products, Wood and Paper Products, Printing, Coal and Petroleum Products, Waste and Remediation Service
Extraction of waste synthetic resin into raw material	119, 285, 286	Synthetic resin, waste collection transport and treatment (industrial), resource recycling service	6, 17	Coal and Petroleum Products, Waste and Remediation Service
Alternative fuel production using oil mist recovery and waste oil	110, 285, 286	Other petroleum refining product, waste collection transport and treatment (industrial), resource recycling service	6, 17	Coal and Petroleum Products, Waste and Remediation Service
Fertilizer production using by-products of fish and meat processing	123, 285, 286	Fertilizer and nitrogenous compound, waste collection transport and treatment (industrial), resource recycling service	7, 17	Chemical Products, Waste and Remediation Service
Construction material production using slag and ash	147, 150, 154, 285, 286	Ceramics for construction, concrete manufacture, asphalt manufactures, Waste collection transport and treatment (industrial), resource recycling service	8, 17	Non-metallic Mineral Products, Waste and Remediation Service
Recovery of valuable metals from process wastewater and sludge	169, 173, 283, 286	Copper smelting, refining and alloy product, other non-ferrous metal smelting, refining and alloy product, waste water and night soil(Industrial), resource recycling service	9, 17	Primary Metal Products, Waste and Remediation Service
Application and extraction of process sludge into raw material	91, 92, 131, 285, 286	Other cardboard, other chemical products, waste collection transport and treatment (industrial), resource recycling service	5, 7, 17	Wood and Paper Products, Printing, Chemical Products, Waste and Remediation Service
Construction material production using inorganic sludge	147, 156, 285, 286	Ceramics for construction, other nonmetallic mineral product, waste collection transport and treatment (industrial), resource recycling service	8, 17	Non-metallic Mineral Products, Waste and Remediation Service

Recovery of valuable metals from waste metals	173, 285, 286	other non-ferrous metal smelting, refining and alloy product, Waste collection transport and treatment (industrial), resource recycling service	9, 17	Primary Metal Products, Waste and Remediation Service
Industrial water production using sewage treatment plant effluent	282, 283	Waste water and night soil (public, Industrial)	17	Waste and Remediation Service
Recycling technology for ferrous metal scrap	157, 159, 285, 286	Pig iron, crude steel, waste collection transport and treatment (industrial), resource recycling service	9, 17	Primary Metal Products, Waste and Remediation Service
Technology of bio-energy production using organic wastewater and by-products	29, 286	LNG, resource recycling service	2, 17	Mined and Quarried Products, Waste and Remediation Service
Extraction of waste synthetic rubber into raw material	120, 132, 137, 139, 285, 286	Synthetic rubber, plastic primary products, tire and tube, other rubber products, waste collection transport and treatment (industrial), resource recycling service	7, 17	Chemical Products, Waste and Remediation Service
Recycling technology for organic by-product in ceramic industry	143, 151, 285, 286	Other glass product, lime and plaster products, waste collection transport and treatment (industrial), resource recycling service	8, 17	Non-metallic Mineral Products, Waste and Remediation Service
Production of Industrial gas using by-product gas	116	Industrial gas	7	Chemical Products
Application and extraction of process sludge into raw material (Silicon recovery in wastewater)	131, 285, 286	Other chemical product, waste collection transport and treatment (industrial), resource recycling service	7, 17	Chemical Products, Waste and Remediation Service
Solid refuse fuel technology using sludge	27, 106, 285, 286	Bituminous coal, diesel oil, waste collection transport and treatment (industrial), resource recycling service	2, 6, 17	Mined and Quarried Products, Coal and Petroleum Products, Waste and Remediation Service
Recovery of organic solvent and reclaimed oil from wastewater and sludge	109, 110, 112, 285, 286	Lubricant and grease, other petroleum refining product, waste collection transport and treatment (industrial), resource recycling service	6, 17	Coal and Petroleum Products, Waste and Remediation Service
Production of the chemical raw materials using by-product gas	131, 286	Other chemicals, resource recycling service	7, 17	Chemical Products, Waste and Remediation Service
Manufacturing of refractory materials using silicon sludge	156, 285, 286	Other nonmetallic mineral product, waste collection transport and treatment (industrial), resource recycling service	8, 17	Non-metallic Mineral Products, Waste and Remediation Service
Regeneration technology of waste adsorbent	131, 285, 286	Other chemical product, waste collection transport and treatment (industrial), resource recycling service	7, 17	Chemical Products, Waste and Remediation Service
Production of microbial preparation using by-products, such as food processes and probiotics	55	feed	3	Food and Beverages Products
Fertilizer production using waste refractory materials	123, 285, 286	Fertilizer and nitrogenous compound, Waste collection transport and treatment (industrial), resource recycling service	7, 17	Chemical Products, Waste and Remediation Service
Recovery of valuable metals in waste oil	173, 285, 286	other non-ferrous metal smelting, refining and alloy product, waste water and night soil(Industrial), resource recycling service	9, 17	Primary Metal Products, Waste and Remediation Service
Production of adsorbent using sludge	131		7	Chemical Products
Fertilizer production using organic sludge	123, 285, 286	Fertilizer and nitrogenous compound, waste collection transport and treatment (industrial), resource recycling service	7, 17	Chemical Products, Waste and Remediation Service

Fuel production using waste wood	27, 29, 85, 88, 106, 285, 286	Bituminous coal, LNG, recycling lumber, other wooden products, diesel oil, waste collection transport and treatment (industrial), resource recycling service	2, 5, 6, 17	Mined and Quarried Products, Wood and Paper Products, Printing, Coal and Petroleum Products, Waste and Remediation Service
Production of reducing agents for steel making using coke particle	117, 285, 286	other inorganic compounds, waste collection transport and treatment (industrial), resource recycling service	7, 17	Chemical Products, Waste and Remediation Service
Application and extraction of ash into rubber product filler	120, 285, 286	synthetic rubber, waste collection transport and treatment (industrial), resource recycling service	7, 17	Chemical Products, Waste and Remediation Service
Application and extraction of process sludge into floor filler	85, 88, 285, 286	recycling lumber, other wooden products, waste collection transport and treatment (industrial), resource recycling service	5, 17	Wood and Paper Products, Printing, Waste and Remediation Service
Construction material production using inorganic by-product	156, 285, 286	other nonmetallic mineral product, waste collection transport and treatment (industrial), resource recycling service	8, 17	Non-metallic Mineral Products, Waste and Remediation Service
Hydrotalcite production using fly ash	131, 285, 286	Other chemical product, waste collection transport and treatment (industrial), resource recycling service	7, 17	Chemical Products, Waste and Remediation Service



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