FAQ Sheet

Stage 1
Pre-Treatment

Q Inputs- cars v Semi tires?

A All units accept standard passenger (PCP) and truck (TBA) tires. Heavier-wall truck tires deliver slightly higher mass/ton but similar yield %. Mixed streams are common; ensure metal removal and size reduction per the feed spec in your proposal.

Q Utilities per ton for pre-processing?

A Pre-processing power is site-equipment dependent (shredders, magnets, granulators) and not part of the PE-series utility table. As a planning proxy: include the shredder OEM's kWh/ton plus our reactor table for the pyrolysis stage

Q Additional equipment recommended?

A Yes — typically forklift/telehandler, infeed conveyor or auger, magnetic separation, weigh scale, dust collection (as required by code), and fire-watch/infrared for tire storage. Details are set during pre-FEED.

Q Space requirements - equipment vs working area?

A Pre-processing power is site-equipment dependent (shredders, magnets, granulators) and not part of the PE-series utility table. As a planning proxy: include the shredder OEM's kWh/ton plus our reactor table for the pyrolysis stage

Q Capacity – Daly Throughput?

A WL3 (3-tons per day), WL6 (6-tons per day), WL50 (50-tons per day)

WL 100 (100-tons per day), WL150 (150-Tons per day)

FAQ Sheet

BY STAGE

Stage 1
Continued

Q Labor – Tires processed per ton?

A Labor varies with site logistics. For the pyrolysis line, 3 operators/shift run a single line (all models up to 60 TPD). Pre-processing labor depends on your shredder/grinder automation.

Q Outputs from Stage 1?

A Scrap steel yield mirrors tire carcass content; polymer fraction proceeds to Stage 2. Pre-batching is common to support continuous reactor operation.

Stage 2
Thermal Decomposition Reactor

Q What inputs are required?

A Sized tire/biomass feed plus electrical power (208/230 Volts AC 3 phase 60Hz) and start-up fuel (LP Gas, natural gas or Diesel) once hot, the system uses recovered syngas for >85% of process heat.

Q What ancillary tools are recommended?

A A Spare pump, instrument air compressor (if not plant-supplied), and routine cleaning tools. We ship a 12-month consumables kit and define PM in the O&M manual.

FAQ Sheet

BY STAGE

Stage 2
continued

Q Utilities per ton – Electrical & Fuel?

A

Utilities scale by model. Using WL30-P (30 TPD) as example:

- Electrical: ~35 kW at 30 TPD 08 kWh/ton (35 kW + 1.25 t/hr).
- Start-up fuel: ~12 gal/hr heavy oil 9.6 gal/ton during start-up only. After stabilization, burners are primarily syngas-fired; auxiliary fuel drops dramatically.

The draft figure "70 kWh and 80 kg/h natural gas" is not our spec for WL50-P. Our heaters are designed around heavy oil start-up and syngas recycle; natural gas is optional where available.

Q Space & special requirements?

A

See the model spec sheets for details. All models use closed-loop cooling (< 40 °c return), negative pressure -50 to -100 Pa, and require 4,000 psi pad. Fire suppression per code; electrical room separation as required by AHJ.

Q Capacity & cycle?

A

Reactors are continuous systems with 60 days, and 3 days planned maintenance. Throughputs are in Tons per day (TPD); conversion to short tons or metric tons can be provided in proposals.

Q What labor & attendance is needed?

A

3 operators/shift per line (WL3-WL50). Centralized control increases staffing to 5-6 for WL150. Lines are not left unattended; remote monitoring assists but does not replace operators.

FAQ Sheet

Stage 2
continued

Q Outputs & values – planning basis?

A

- Oil: [N] 45% of input mass. Empirically z [N]143 gal/ton for tire feed (see PE3/PE6 daily outputs). Sold as pyrolysis crude or upgraded to diesel in WD-D. Pricing is contract-dependent; typical planning range used in this packet is $1.50-$3.00/gal (ex-works unless otherwise contracted).
- Carbon black/ biochar: [N]35% of input mass. Value depends on ash, particle size, activation/milling, and buyer specs. We support QA steps (sieving, oil adsorption, ash testing) to target higher tiers. Pricing and logistics are buyer-contract dependent.
- Syngas: of input mass. Reburned to supply process heat; usually no net sale.

The draft numbers 40/35/15 (and "$800-2,500/ton" for carbon black) are not applicable. Our planning ratios are 45/35/20 by mass and carbon products are priced by weight and spec, not gallon.

Stage 3
Distillation

Q What inputs are required?

A

Pyrolysis crude oil from WL-series plus electric power (model-dependent) and standard cooling water. Upgrading is achieved via thermal fractionation to diesel/kerosene ranges. Blending for high-cetane targets can be arranged with off-takers

Q Capacity & cycle?

A

Reactors are continuous systems with 60-day runs and ~3-day planned maintenance. Throughputs are in metric TPD; conversion to short tons can be provided in proposals.

FAQ Sheet

Stage 3
continued

Q Utilities per ton?

A Utilities vary by model and cut plan; use proposal figures. Where prior drafts list "70 kWh & 80 kg/h natural gas", note that distillation modules are electrically driven with thermal duty supplied by packaged heaters; natural gas is optional where preferred by owner.

Q Space & special requirements?

A Skid/module footprints are sized to match the paired reactor output. Provide secondary containment for tanks, fire-rated separation where required, and truck loading aprons with spill control.

Q What is the capacity & timing?

A Each WL-D model is sized for the matched reactor daily crude output (e.g., [N] 4,300 gal/day from WL50). Distillation runs concurrently with the reactor during normal operations.

Q How much labor is needed?

A Managed by the same 3-operator cadre per shift for single-line sites.

Q What outputs are produced?

A Cut plan determines fractions; a diesel-optimized plan yields predominantly #2 low-sulfur, high-cetane diesel, with smaller kerosene/light fractions and a heavy bottoms stream recycled or sold. Final yields are contract- and recipe-specific.

FAQ Sheet

Stage 4
Storage & Custody Transfer

Q What are the containment requirements?

A Design for >110% of the largest single tank within each diked area (typical SPCC practice). Use API 650/620 vertical tanks for bulk and UL-142, day tanks as applicable. Include lined berms, sumps, and overfill/level alarms.

Q What pumps & metering are requirements?

A We specify positive-displacement pumps with custody-transfer-grade meters (Coriolis or PD with temperature compensation) for truck loading. Meter class and calibration intervals are defined in procurement specs; buyer may require third-party seal/verification.

General & Commercial

Q What is the lead time (order install/training)?

A Lead time is quote specific. Typical planning envelope: 2-6 months, fabrication + 2-6 weeks install/commissioning per line, dependent on customs, site readiness, and utility signoffs.

Q What is the system life & warranty?

A Reactor design life 15-20+ years with PM; 5-year reactor warranty standard. Other component warranties per OEM.

FAQ Sheet

General
continued

Q Expected maintenance & downtime?

A A Quarterly PM with lubrication, and inspections. Operating cadence: 60 days on / ~3 days planned maintenance. Annual budgets scale from ~ $30k (PE3) to ~$250k (WL150).

Q Support in case of failure?

A If a fault occurs, the PLC places equipment in a safe state. Our team provides 36-month remote diagnostics and on-site service per support plan; critical spares are included for year one

Q Where are the reference sites?

A Active demo: Orlando, Florida. Additional sites: are coming online ask your representative for locations. Site visits coordinated under NDA and host availability.

Q What are the regulatory requirements?

A Generally, includes air permit, fire code compliance (NFPA), SPCC for tanks/containment, stormwater control, and any scrap water discharge permits. Requirements are jurisdiction-specific; we provide the equipment data pack for your EOR/permitting team.

Q Pyrolysis oil vs Petroleum crude?

A Pyrolysis oil is a thermally cracked product from tires/biomass with higher oxygenates, acidity, and instability than petroleum crude. It is not pipelining crude; we distill on-site to produce ASTM-grade diesel and light fractions suitable for sale.