

FEEDSTOCK READINESS CHECKLIST

10-POINT SCREENING SEQUENCE · COMPANION TO TOKEF.PT/RESOURCES

PHASE 01-03

Work through every checkpoint before a thermal conversion concept is taken seriously. A fuel that fails early items fails economically later the sequence is ordered by cost of discovery.

PHASE 01 Characterize the material

- ☐ **Representative samples collected not curated ones**
Sample at the conveyor, silo discharge or delivery truck, never from a hand-picked pile.
- ☐ **Proximate analysis completed (moisture, ash, volatiles, fixed carbon)**
ISO 18134 / 18122 / 18123 basis. This is the four-value fingerprint that gates everything downstream.
- ☐ **Calorific value measured (GCV and NCV)**
Bomb calorimetry per ISO 18125 every business case is built on this number.
- ☐ **Ash fusion behaviour and oxide composition tested**
Slagging, fouling and bed agglomeration risk must be quantified before reactor selection, not after.

PHASE 02 Define the fuel envelope

- ☐ **Seasonal and supplier variation mapped**
Design to the worst realistic fuel, not the optimistic annual average.
- ☐ **Contamination risks identified (chlorine, alkalis, heavy metals, inert fractions)**
These decide gas cleaning complexity and emission control design.
- ☐ **Logistics and storage assessed (density, seasonality, indoor cover)**
A fuel that is free on paper can be uneconomic once handling and drying are priced in.

PHASE 03 Decide with numbers

- ☐ **Conversion route matched to measured fuel properties**
Reactor concept and gas cleaning follow the fuel never the brochure.
- ☐ **Drying or pre-treatment energy priced into the energy balance**
Above ~3035% moisture, autothermal operation needs pre-drying cost it honestly.
- ☐ **Re-verification plan agreed for supply-chain changes**
Whenever the fuel source changes, the analysis repeats. This clause belongs in every fuel contract.

NEXT STEP

Send representative samples for proximate, ultimate, calorific and ash analysis.

info@tokef.pt · tokef.pt/laboratory – sampling and shipping guidance available.