

# Waste to Energy Framework

## OBJECTIVE

To establish economically viable and environmental sound waste to energy projects that reduce waste to landfill and provide alternative energy sources for local communities and businesses.

## FRAMEWORK

For any waste to energy projects to succeed, three parameters need to be fully understood. Given a thorough understanding of these three parameters, the appropriate technology, if viable, can be identified.

### 1. Feedstock

- Secure - long term supply available and contracts
- Known - volumes, composition, calorific values, moisture
- Frequency - how often is the feedstock available
- Location - where, and what distribution, is the material
- Gate fee - cost of collection, comparable cost of disposal

### 2. Site

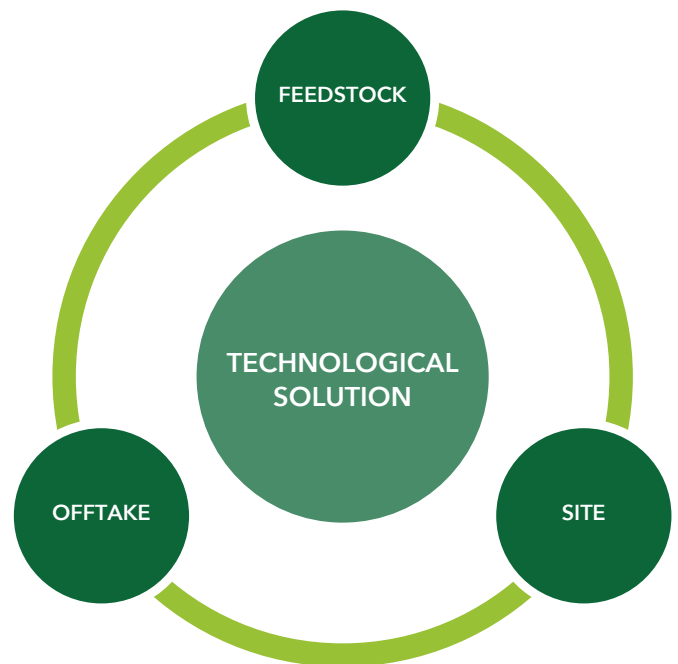
- Social license - EPA permits, community acceptance, planning permits
- Proximity to feedstock and offtake

### 3. Offtake

- Demand
- Price
- Matching potential scale of feedstock with offtake requirements
- Infrastructure for delivering offtake

### 4. Technology

- Select and build appropriate technology



# Step by Step Implementation Plan

## 1. IDENTIFY OBJECTIVES OF PROJECT

- What is the key purpose of the project? - Produce energy? Manage waste? Etc?
- What are the key drivers for the project?
- What are the key priorities?
- Who are the stakeholders in the project?
- Outline project brief and establish project reference group - technical/working and community

## 2. SECURE SITE

### Community social licence

- Engage community stakeholders - clear and regular communication to gain community acceptance of the project

### Planning controls

- Ensure that there are suitable planning zones and buffers for the proposed activities
- Obtain required planning permits

### Permits and works approval

- Obtain required works approvals from the Environmental Protection Authority

## 3. CONTRACT FOR WASTE

- Secure a waste contract. A contract for the feedstock needs to be secured at an appropriate length for the project life span.
- Understand the quality of waste. The composition of the feedstock will be required; this could include the moisture, chemical composition or calorific value.
- Determine the gate fee price. The gate fee price will be a key determinate of the mechanisms of the financial management of the project.

## 4. CONTRACT FOR OFF-TAKE

- Identify off-takes for potential energy types. These also need to be long term to ensure the viability of the project.
- Determine the energy sale price. The energy sale price will be a key determinate of the mechanisms of the financial management of the project.

## 5. FEASIBILITY STUDY

- Undertake feasibility study. With the in-principle agreements, MoUs, and information outlined above, the feasibility of different technologies and scales can be tested.
- Ensure the management of residues is included in the feasibility study. The management of the residues of the potential technologies then need to be fed back into the feasibility study to fully assess the lifecycle costs.
- Establishing a business case would incorporate costs associated with feedstock management, other operation and maintenance matters, the costs of approvals and the procurement of infrastructure and any site and grid connection costs.

## 6. FINANCE

Secure finance. With the feasibility study completed, the most appropriate technology selected, finance can be secured.

## 7. OPERATIONAL MODEL

The operational model can now be determined.

## 8. BUILD AND COMMISSION

For a copy of the GCW Implementation Plan or for more information visit

[www.recyclingrevolution.com.au](http://www.recyclingrevolution.com.au)