



SAHYOG
19 NOVEMBER 2014



Design, Build, Own & Operate Biobased Companies





12th Plan Targets (up to March 2017)

Technology	Target*	Investment required
Wind Power Projects	15000 MW	US\$15 billion
Small Hydro Projects	2100 MW	US\$2.1 billion
Biomass based power projects	2700 MW	US\$2.7 billion
Grid connected Solar power projects	10000 MW	US\$12 billion
Off grid solar power projects	1000 MW	US\$1.8 billion
Aggregate	30800 MW	US\$33.6 billion

** These are now being up-scaled to 100 GW capacity addition in next five years (about 20000 MW every year) requiring about US\$ 20 billion every year excluding power evacuation facility.*

Table 4: Current Bioenergy power generation in India.²⁹



No.	Sector	Total Deployment (2012-13)	Cummulative Capacities (till 31.07.2013)	Total target (at end of 12th five year plan)	Estimated Potential
Grid Interactive Power (Capacities in MW)					
1.	Biomass Power	113.50	1263.80	1525	18,000
2.	Baggasse Cogeneration	315.70	2337.43	3216	10,000
3.	Waste to Power (Urban& Industrial)	6.40	96.08	324	2,700
Off Grid / Captive Power (Capacities in MW_{Eq})					
4.	Waste to Energy (Urban & Industrial)	13.82	115.57	NA	NA
5.	Biomass Cogeneration (non-baggasse)	60.59	486.84	NA	NA
6.	Biomass Gasifiers			NA	NA
	(Rural)	0.672	18.79	NA	NA
	(Industrial)	6.02	140.10	NA	NA
	Biogas based Energy System	0.65	0.65		
7.	Family Biogas Plants (in 000')	77	4623	5600	12,000

NA: Not Available

*Includes 1932 MW from private sector sugar mills while additional capacity from cooperative sector likely to be commissioned by August 2012



Conditions



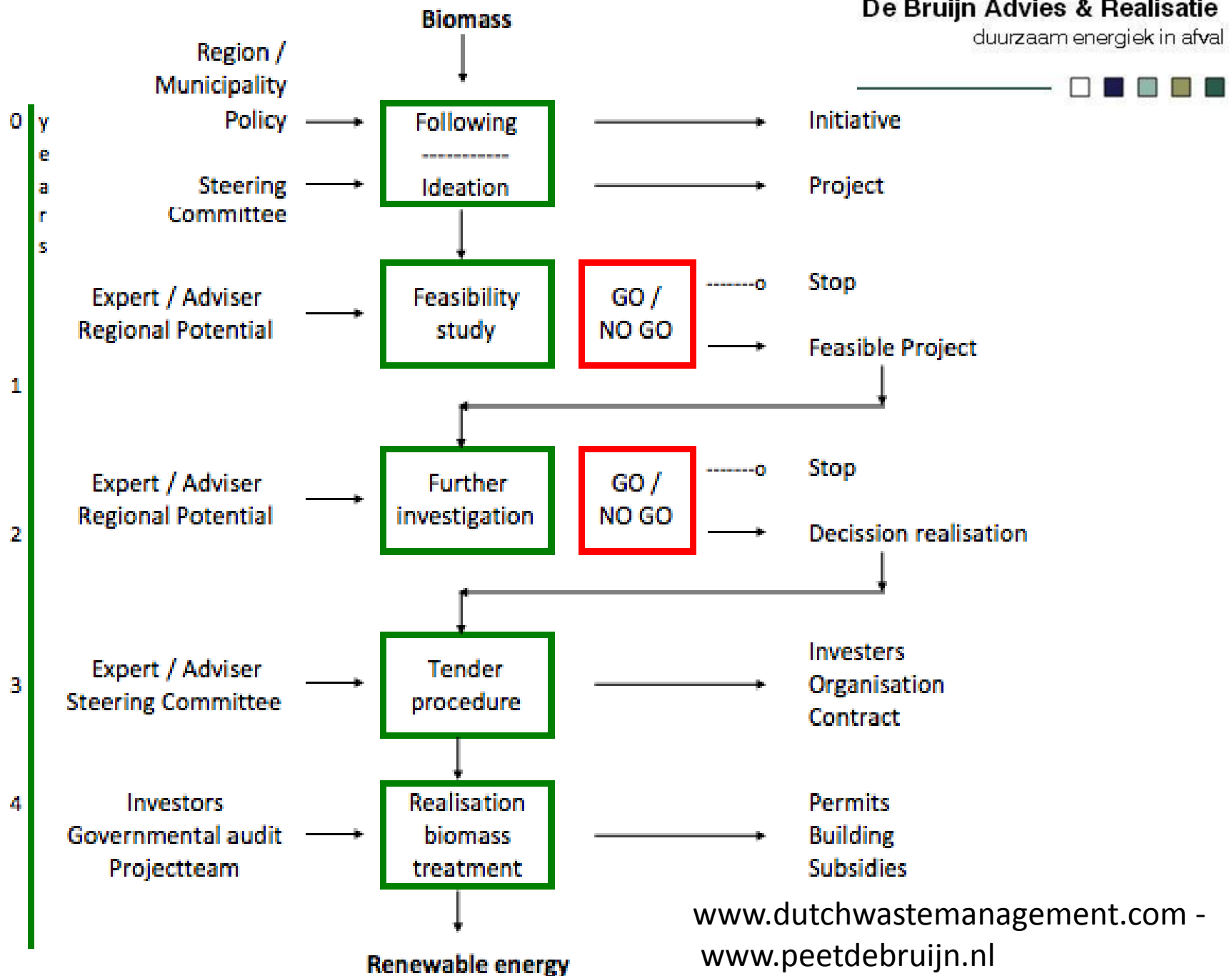
- Capacity, equipment, innovations/pilots, logistics
 - Potential locations
 - Profits and loss, finance, subsidy, taxes
 - Impact environment
 - Stake and shareholders (logistic, input, process & output), tariffs
 - Relation with other projects and policy, legal entity
 - Communication
-
- Essential is that involved agree this policy and are willing to minimise changes
 - Project experience en logistics biomass streams connecting to refinery innovation



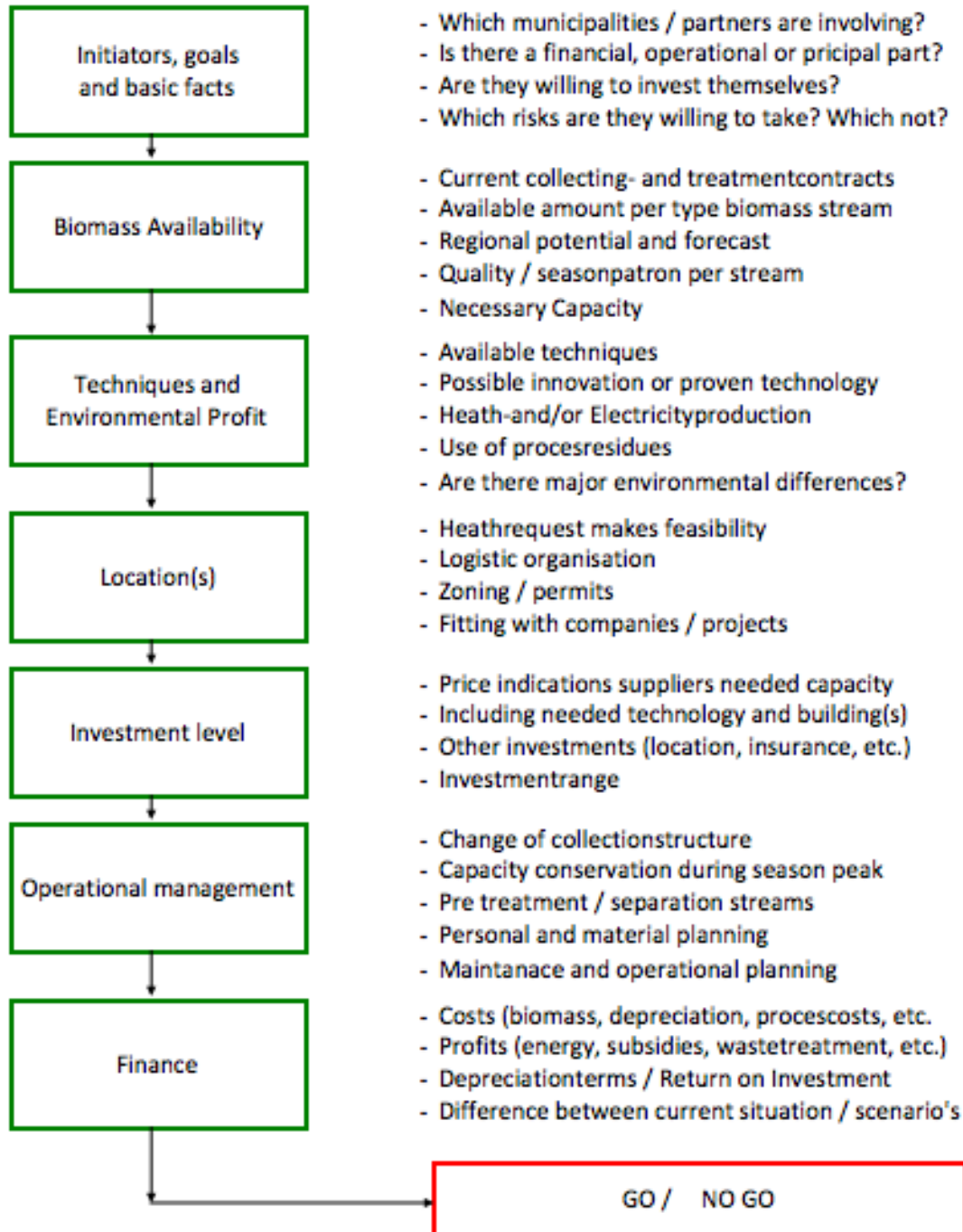
Staging (Cooperation model)



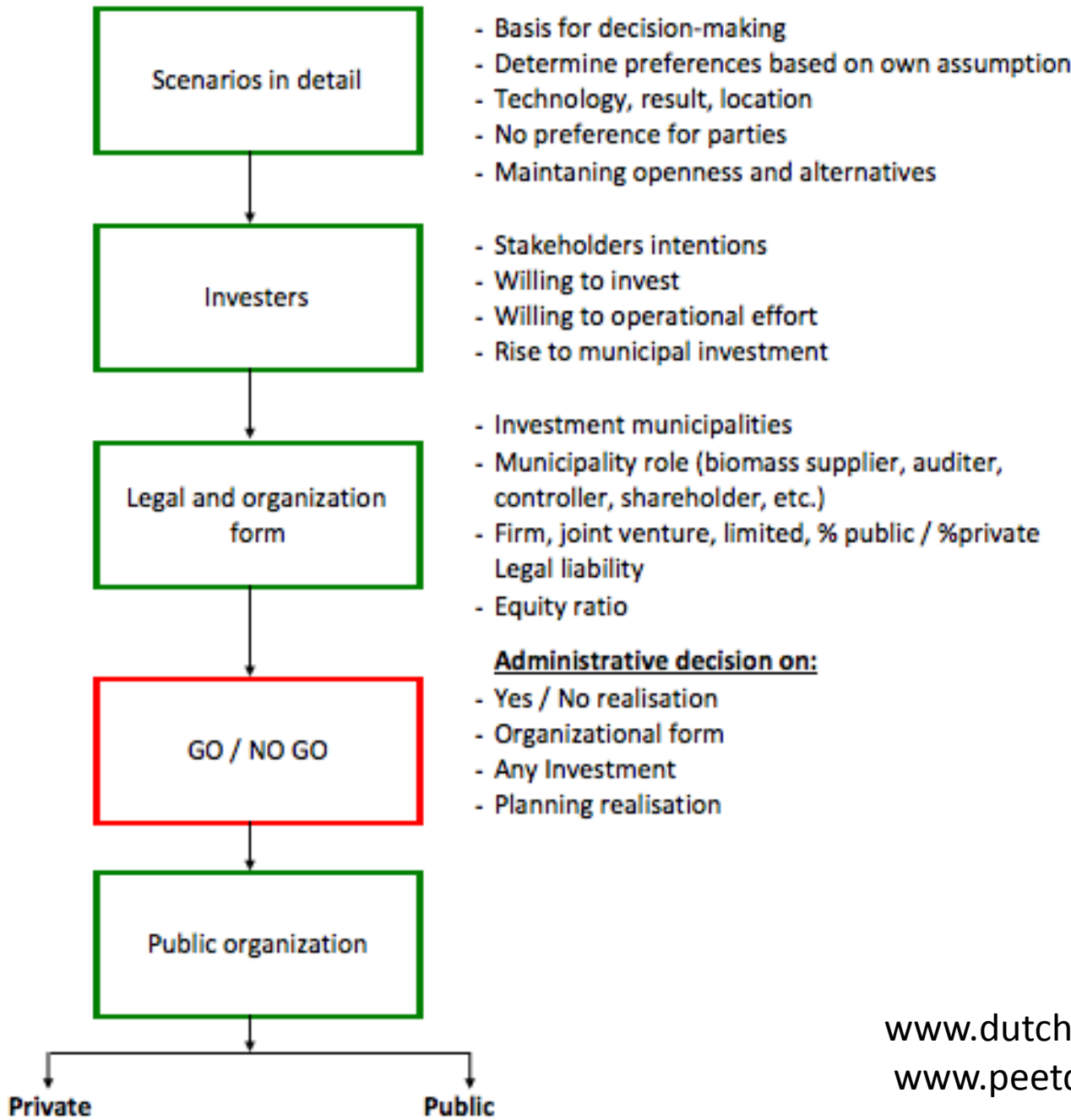
Quick Scan <i>If the first idea arises</i>	Exploration or feasibility phase <i>From first idea to global plan</i>	Planning phase or preparation phase <i>Of global plan to final plan</i>	Realisation Phase <i>From plan to execution</i>
a. Sustainable energy policy and draw up framework conditions	a. Support initiators in preparing project plan and feasibility studies	a. Project designs and approach to assess suppliers	a. Encourage Project developers to continue informing stakeholders
b. Inform citizens and initiators about policy	b. Identify Stakeholders and mapping roles	b. Maintain contact with initiators and let stakeholders be informed	b. Helping initiators at Grand opening
c. Building relationship with initiators	c. Drafting communication plan and Stakeholder analysis	c. Mediate in conflicts	
d. Inform initiators and citizens about governmental procedures	d. Agree on communication and media		
	e. Shaping Interactive development process (stakeholders)		
	f. Translate ideas, needs and expectations of stakeholders to proposals		
	g. Advice stakeholders about permits and procedures		



Feasibility Study: Main subjects



Further investigation: details





At Your Service

- **Peet de Bruijn**
 - Board Member Dutch Waste Management
 - info@dutchwastemanagement.com

- **De Bruijn Advice & Practice**
 - Director / owner
 - info@peetdebruijn.nl



De Bruijn Advies & Realisatie
duurzaam energiek in afval

