

ผนวก ง

ผลการสำรวจเพื่อคัดเลือกกิจกรรมสำคัญที่มีผลต่อบริษัทความถี่ของโครงการก่อสร้างโรงไฟฟ้า

Phase	Project Life Cycle												No. of decision maker
	Time			Cost			Quality						
	H	M	L	H	M	L	H	M	L	H	M	L	
1. Power market survey	4	5	6	5	4	6	6	5	4	6	5	4	15
2. Pre-feasibility study	4	5	6	4	4	7	7	5	3				15
3. Roughcast of technical specification such as Site Location, Fuel supply and Water supply	3	6	6	6	4	5	5	6	4				15
4. Establishment of Alternatives	3	5	7	4	6	5	5	3	7				15
5. Investigate policy and regulation	2	7	6	4	4	7	5	4	6				15
6. Consider a power sales agreement	2	8	5	5	6	4	4	6	5				15
7. Cost estimation and preliminary financial analysis	1	9	5	7	5	3	4	8	3				15
8. Project Proposal to lender	3	7	5	6	5	4	3	6	6				15

ผลการสำรวจเพื่อคัดเลือกกิจกรรมสำคัญที่มีผลต่อปัจจัยความล่าช้าของโครงการก่อสร้างโรงไฟฟ้า

Phase	Project Life Cycle												No. of decision maker
	Time			Cost			Quality						
	H	M	L	H	M	L	H	M	L				
9. Final Feasibility study	4	5	6	5	3	7	8	3	4	4	15		
10. Evaluate of alternative site and selection if optimum site	4	6	5	5	6	4	6	4	5	15			
11. Evaluate of alternative arrangement and Technical evaluation such as capacity, heat rate, maintenance, availability and reliability and Selection of preferred plant	4	8	3	7	4	4	6	7	2	15			
12. Power Plant conceptual design such as description of all system, development of performance data, Delivery of equipment to site and Environmental consideration	5	8	2	8	5	2	9	5	1	15			
13. Estimate capital cost, O&M cost, fuel consumption, consumption of utilities and draw down schedule	2	8	5	8	5	2	4	8	3	15			
14. Financial Analysis	3	7	5	5	5	5	7	5	3	15			
15. Negotiation of purchase agreement	4	5	6	6	7	2	3	4	8	15			
16. Negotiation of Fuel supply agreement	3	6	6	7	5	3	6	5	4	15			

Phase 2 : Project Evaluation and Development

ผลการสำรวจเพื่อคัดเลือกกิจกรรมสำคัญที่มีผลต่อยังยความสำเร็ของโครงการก่อสร้างโรงไฟฟ้า

Phase	Project Life Cycle										No. of decision maker	
	Time			Cost			Quality					
Activities	H	M	L	H	M	L	H	M	L	H	M	L
17. Environmental Approval process	11	4	0	5	10	0	7	8	0			
18. Preparation of EPC contract specification(s)	7	6	2	6	6	3	8	6	1			
19. Pre-qualification of Bidder for Issue of Tenders such as Past Performance, Technical Competence, Financial Soundness, Organization Capability	4	7	4	3	7	5	7	5	3			
20. Advertise for bidding	1	4	10	0	3	12	2	3	10			
21. Answering queries from contractors	4	4	7	1	5	9	1	7	7			
22. Technical and commercial evaluation of the tenders	4	8	3	3	6	6	8	4	3			
23. Contract negotiation with the selected contractor(s)	4	10	1	7	6	2	9	5	1			
24. Discussion documentation and negotiation associated with achieving financial closure	3	6	6	7	6	2	7	5	3			
25. Detail design and approval	9	6	0	6	9	0	9	5	1			
26. Negotiation O&M contract	2	5	8	7	5	3	7	7	1			
27. Issue of final letter of award/purchase agreement for contracts	6	5	4	2	6	7	3	6	6			
28. Send letter of intention	5	3	7	0	6	9	1	4	10			

Phase 3 : Project Implementation

ผลการสำรวจเพื่อคัดเลือกกิจกรรมสำคัญที่มีผลต่อปัจจัยความล่าช้าของโครงการก่อสร้างโรงไฟฟ้า

Phase	Project Life Cycle												No. of decision maker
	Time			Cost			Quality						
	H	M	L	H	M	L	H	M	L				
	7	6	2	4	9	2	5	8	2	15			
29. Planning, scheduling and revise schedule													
30. Raw material inspection	3	8	4	2	8	5	8	5	2	15			
31. Construction in each phase	13	2	0	7	8	0	10	5	0	15			
32. Monitor of the contractor's progress	2	5	8	3	5	7	7	4	4	15			
33. Management of claims and disputes	7	7	1	2	11	2	5	8	2	15			
34. Performance test and inspection	8	5	2	3	8	4	11	3	1	15			
35. Commissioning and take over by O&M contractor	8	7	0	6	5	4	10	4	1	15			
36. Commercial operation	13	1	1	6	8	1	8	4	3	15			

ผลการจัดลำดับกิจกรรมที่มีความสำคัญในโครงการก่อสร้างโรงไฟฟ้าโดยพิจารณาจากปัจจัยแห่งความสำคัญโครงการ ได้แก่ ระยะเวลา งบประมาณ คุณภาพ

Rank	Project Life Cycle		Time			Cost			Quality			Overall
	Phase	Activities	0.222			0.511			0.267			
			0.6	0.3	0.1	0.6	0.3	0.1	0.6	0.3	0.1	
1	Phase 4 : Construction	Construction in each phase	0.867	0.133	0.000	0.467	0.533	0.000	0.667	0.333	0.000	0.483
2	Phase 3 : Project Implementation	Detail design and approval	0.600	0.400	0.000	0.400	0.600	0.000	0.600	0.333	0.067	0.446
3	Phase 4 : Construction	Commercial operation	0.867	0.067	0.067	0.400	0.533	0.067	0.533	0.267	0.200	0.441
4	Phase 3 : Project Implementation	Environmental Approval process	0.733	0.267	0.000	0.333	0.667	0.000	0.467	0.533	0.000	0.437
5	Phase 2 : Project Evaluation and Development	Power Plant conceptual design	0.333	0.533	0.133	0.533	0.333	0.133	0.600	0.333	0.067	0.429
6	Phase 4 : Construction	Commissioning and take over by O&M contractor	0.533	0.467	0.000	0.400	0.333	0.267	0.667	0.267	0.067	0.419
7	Phase 3 : Project Implementation	Contract negotiation with the selected contractor(s)	0.267	0.667	0.067	0.467	0.400	0.133	0.600	0.333	0.067	0.417
8	Phase 3 : Project Implementation	Preparation of EPC contract specification(s)	0.467	0.400	0.133	0.400	0.400	0.200	0.533	0.400	0.067	0.405
9	Phase 4 : Construction	Performance test and inspection	0.533	0.333	0.133	0.200	0.533	0.267	0.733	0.200	0.067	0.388
10	Phase 3 : Project Implementation	Discussion documentation and negotiation associated with achieving financial closure	0.200	0.400	0.400	0.467	0.400	0.133	0.467	0.333	0.200	0.380

ผลการจัดลำดับกิจกรรมที่มีความสำคัญในโครงการก่อสร้างโรงไฟฟ้าโดยพิจารณาจากปัจจัยด้าน

ระยะเวลา

Rank	Project Life Cycle		Likelihood			Weight
	Phase	Activities	0.6	0.3	0.1	
1	Phase 4 : Construction	Construction in each phase	0.867	0.133	0.000	0.560
2	Phase 4 : Construction	Commercial operation	0.867	0.067	0.067	0.547
3	Phase 3 : Project Implementation	Environmental Approval process	0.733	0.267	0.000	0.520
4	Phase 3 : Project Implementation	Detail design and approval	0.600	0.400	0.000	0.480
5	Phase 4 : Construction	Commissioning and take over by O&M contractor	0.533	0.467	0.000	0.460
6	Phase 4 : Construction	Performance test and inspection	0.533	0.333	0.133	0.433
7	Phase 4 : Construction	Management of claims and disputes	0.467	0.467	0.067	0.427
8	Phase 3 : Project Implementation	Preparation of EPC contract specification(s)	0.467	0.400	0.133	0.413
9	Phase 4 : Construction	Planning, scheduling and revise schedule	0.467	0.400	0.133	0.413
10	Phase 2 : Project Evaluation and Development	Power Plant conceptual design	0.333	0.533	0.133	0.373

ผลการจัดลำดับกิจกรรมที่มีความสำคัญในโครงการก่อสร้างโรงไฟฟ้าโดยพิจารณาจากปัจจัยด้าน
งบประมาณ

Rank	Project Life Cycle		Likelihood			Weight
	Phase	Activities	0.6	0.3	0.1	
1	Phase 4 : Construction	Construction in each phase	0.467	0.533	0.000	0.440
2	Phase 2 : Project Evaluation and Development	Power Plant conceptual design such as description of all system, development of performance data, Delivery of equipment to site and Environmental consideration	0.533	0.333	0.133	0.433
3	Phase 2 : Project Evaluation and Development	Estimate capital cost, O&M cost, fuel consumption, consumption of utilities and draw down schedule	0.533	0.333	0.133	0.433
4	Phase 3 : Project Implementation	Detail design and approval	0.400	0.600	0.000	0.420
5	Phase 3 : Project Implementation	Contract negotiation with the selected contractor(s)	0.467	0.400	0.133	0.413
6	Phase 3 : Project Implementation	Discussion documentation and negotiation associated with achieving financial closure	0.467	0.400	0.133	0.413
7	Phase 4 : Construction	Commercial operation	0.400	0.533	0.067	0.407
8	Phase 1 : Project Formation and Identification	Cost estimation and preliminary financial analysis	0.467	0.333	0.200	0.400
9	Phase 2 : Project Evaluation and Development	Negotiation of Fuel supply agreement	0.467	0.333	0.200	0.400
10	Phase 3 : Project Implementation	Environmental Approval process	0.333	0.667	0.000	0.400

ผลการจัดลำดับกิจกรรมที่มีความสำคัญในโครงการก่อสร้างโรงไฟฟ้าโดยพิจารณาจากปัจจัยด้าน

คุณภาพ

Rank	Project Life Cycle		Likelihood			Weight
	Phase	Activities	0.6	0.3	0.1	
1	Phase 4 : Construction	Performance test and inspection	0.733	0.200	0.067	0.507
2	Phase 4 : Construction	Construction in each phase	0.667	0.333	0.000	0.500
3	Phase 4 : Construction	Commissioning and take over by O&M contractor	0.667	0.267	0.067	0.487
4	Phase 2 : Project Evaluation and Development	Power Plant conceptual design such as description of all system, development of performance data, Delivery of equipment to site and Environmental consideration	0.600	0.333	0.067	0.467
5	Phase 3 : Project Implementation	Contract negotiation with the selected contractor(s)	0.600	0.333	0.067	0.467
6	Phase 3 : Project Implementation	Detail design and approval	0.600	0.333	0.067	0.467
7	Phase 3 : Project Implementation	Preparation of EPC contract specification(s)	0.533	0.400	0.067	0.447
8	Phase 3 : Project Implementation	Environmental Approval process	0.467	0.533	0.000	0.440
9	Phase 4 : Construction	Raw material inspection	0.533	0.333	0.133	0.433
10	Phase 3 : Project Implementation	Negotiation O&M contract	0.467	0.467	0.067	0.427