

MANMADE Should Have Started Tasks as of Mon 9/17/07
MANMADE Project

ID	Name	Start	Finish	% Complete	Lead Resource
1	WP1	Mon 1/1/07	Mon 12/28/09	2%	QMUL
<i>Notes</i>					
Project Management					
2	Tasks	Mon 1/1/07	Mon 12/28/09	0%	
3	T1.1	Mon 1/1/07	Mon 12/28/09	0%	
<i>Notes</i>					
Establish the formal structure of the project management groups and advisory committees					
4	T1.2	Mon 1/1/07	Mon 12/28/09	0%	
<i>Notes</i>					
Conduct financial transactions.					
5	T1.3	Mon 1/1/07	Mon 12/28/09	0%	
<i>Notes</i>					
Compile and monitor project deliverables and reports.					
6	T1.4	Mon 1/1/07	Mon 12/28/09	0%	
<i>Notes</i>					
Compile and monitor calendar for project meetings.					
7	T1.5	Mon 1/1/07	Mon 12/28/09	0%	
<i>Notes</i>					
Compile dissemination and outreach activities.					
8	T1.6	Mon 1/1/07	Mon 12/28/09	0%	
<i>Notes</i>					
Brokerage on scientific, ethical, gender and administrative matters.					
20	WP2	Mon 1/1/07	Mon 12/28/09	0%	JRC
<i>Notes</i>					
Network Collation					
21	Tasks	Mon 1/1/07	Mon 12/28/09	0%	
25	T2.4	Mon 1/1/07	Fri 3/27/09	0%	
<i>ID</i>	<i>Successor Name</i>	<i>Type</i>	<i>Lag</i>		
77	T5.2	FS	0 days		
<i>Notes</i>					
Liaise with electricity market authorities from Nord Pool electricity markets in order to obtain, directly, time series of spot market prices.					
74	WP5	Mon 1/1/07	Mon 12/28/09	0%	LIUC
<i>Notes</i>					
Dynamics of supply-chain and market volatility of networks					
75	Tasks	Mon 1/1/07	Mon 12/28/09	0%	
76	T5.1	Mon 1/1/07	Mon 6/30/08	0%	
<i>Notes</i>					
Definition of the supply-chain logical model by means of the Petri nets formalism; development of the corresponding simulation model; identification and evaluation of the risky events concerning the supply chain. Development and implementation of model of					

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ID	Name	Start	Finish	% Complete	Lead Resource
94	WP6	Mon 1/1/07	Mon 12/28/09	0%	MASA
<i>Notes</i>					
Vulnerability of interconnected networks					
95	Tasks	Mon 1/1/07	Mon 12/28/09	0%	
98	T6.3	Mon 1/1/07	Fri 12/28/07	0%	
<i>Notes</i>					
Theoretical analysis of vulnerability of interconnected grids of differing topologies.					
99	T6.4	Mon 1/1/07	Fri 3/28/08	0%	
<i>ID</i>	<i>Successor Name</i>	<i>Type</i>	<i>Lag</i>		
102	T6.7	FS	0 days		
<i>Notes</i>					
Analysis of the effect of scaling (number of nodes and lines) on the vulnerability for given grid topology types.					
78	T5.3	Mon 1/1/07	Mon 12/28/09	0%	
<i>Notes</i>					
Assessment of blackouts events: non-linear time series analysis of volatility in energy market spot prices will be used to correlate spot prices with blackouts. The analysis would be made both adapting typical financial models (GARCH models) to the energy					
22	T2.1	Mon 1/1/07	Mon 12/28/09	0%	
<i>Notes</i>					
Initiate, expand and maintain continuous contact with organizations responsible for electricity high-voltage, energy and urban networks in order to obtain the most up-to-date topographical maps of grid systems.					
24	T2.3	Mon 1/1/07	Fri 12/28/07	0%	
<i>ID</i>	<i>Successor Name</i>	<i>Type</i>	<i>Lag</i>		
97	T6.2	FS	0 days		
<i>Notes</i>					
Compile map of major gas trunk from North Sea and Russia and gross gas flow exchanges into W. Europe and transition countries. Assess for each country net dependence and reserves of gas supplied for electricity generation.					
37	WP3	Mon 1/1/07	Mon 12/28/09	0%	QMUL
<i>Notes</i>					
Mathematical Methods					
38	Tasks	Mon 1/1/07	Mon 12/28/09	0%	
39	T3.1	Mon 1/1/07	Fri 3/28/08	0%	
<i>Notes</i>					
Assessment of statistical analysis of methods of non-linear time series and applicability to selected network phenomena (European grid Black outs)					
40	T3.2	Mon 1/1/07	Fri 9/26/08	0%	
<i>Notes</i>					
Assessment of graph-theoretic methods for a-periodic networks.					
41	T3.3	Mon 1/1/07	Fri 6/27/08	0%	
<i>Notes</i>					
Review and development of network growth laws for irregular networks and comparison to real-world electricity and urban infrastructure networks.					

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ID	Name	Start	Finish	% Complete	Lead Resource
45	T3.7	Mon 1/1/07	Fri 6/27/08	0%	
<u>Notes</u>					
Study on the effects on flow dynamics on the scale-free networks.					
57	WP4	Mon 1/1/07	Thu 12/31/09	0%	COLB
<u>Notes</u>					
Electricity Networks					
58	Tasks	Mon 1/1/07	Thu 12/31/09	0%	
59	T4.1	Mon 1/1/07	Mon 12/28/09	0%	
<u>Notes</u>					
Based on girded meteorological, construct wind fields covering Europe with a temporal resolution of 6 hours.					
60	T4.2	Mon 1/1/07	Mon 12/28/09	0%	
<u>Notes</u>					
Based on this wind field, estimate wind power generation on different spatial scales.					
61	T4.3	Mon 1/1/07	Mon 12/28/09	0%	
<u>Notes</u>					
Quantify the statistical properties of this highly intermittent power generation dataset. Concentrating on the spatial scale where the amplitude of fluctuations is optimized with respect to the demand of European electrical power line interconnections.					
82	T5.7	Mon 1/1/07	Mon 12/28/09	0%	
<u>Notes</u>					
Volatility analysis of the energy option markets and pricing of energy options in Europe.					
27	T2.6	Tue 3/6/07	Mon 12/28/09	0%	
<u>Notes</u>					
Prepare and maintain a data base (wherever applicable also GIS-based) containing assembled data sets in format suitable to be used within the context of WP3 (Math methods) and thematic WPs 4 5 6 (electricity, financial, gas and transport interconnections)					
79	T5.4	Mon 4/2/07	Fri 6/26/09	0%	
<u>Notes</u>					
Early warning detection of blackouts using time series of loadings in power transmission systems: state-space divergence reconstruction approach will be used to monitor and measure the timeseries with the objective to set-up a n early warning detection sy					
23	T2.2	Tue 4/3/07	Fri 12/28/07	0%	
<u>Notes</u>					
In the event of the unavailability of grid interconnection tables directly from network utilities generate interconnection tables directly by digitizing maps and parsing the interconnection data as topological connection graphs.					
33	Milestones	Mon 6/4/07	Fri 9/28/07	0%	
34	M2.1	Mon 6/4/07	Fri 6/29/07	0%	
<u>Notes</u>					
Selection of two urban networks viable to conversion into topological connection maps (M6).					
43	T3.5	Mon 6/4/07	Mon 12/28/09	0%	
<u>Notes</u>					
Development of vulnerability indicators for heterogeneous interconnected networks					

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ID	Name	Start	Finish	% Complete	Lead Resource
97	T6.2	Mon 7/2/07	Fri 9/25/09	0%	
<i>Notes</i>					
Compile macroscopic (at national level) of interdependency matrices for electricity and gas networks.					
26	T2.5	Mon 7/2/07	Tue 9/30/08	0%	
<i>Notes</i>					
Generate topologies and graphs of urban transport systems of (Italian urban area)					
62	T4.4	Mon 7/2/07	Fri 6/27/08	0%	
<i>ID</i>	<i>Successor Name</i>	<i>Type</i>	<i>Lag</i>		
63	T4.5	FS	0 days		
96	T6.1	FS	0 days		
100	T6.5	FS	0 days		
<i>Notes</i>					
Topological analysis of EU synchronously connected electricity grids.					
42	T3.4	Mon 7/30/07	Mon 12/28/09	0%	
<i>Notes</i>					
Risk measures for extremely volatile markets will be developed and their robustness against estimation error analyzed.					
28	Deliverables	Mon 9/3/07	Fri 6/27/08	0%	
29	D2.1	Mon 9/3/07	Fri 9/28/07	0%	
<i>Notes</i>					
Data sets of major gas lines and exchange flows between and into Western Europe.					
35	M2.2	Mon 9/3/07	Fri 9/28/07	0%	
<i>Notes</i>					
Agreement with the Nordic Countries Emergency Planning Association (NEF) and NESAs for data sharing of electricity (+other) networks (M9)					
36	M2.3	Mon 9/3/07	Fri 9/28/07	0%	
<i>Notes</i>					
Agreement with NORDPOOL for access to time histories of share prices (M9).					
51	Milestones	Mon 9/3/07	Mon 6/30/08	0%	
52	M3.1	Mon 9/3/07	Mon 6/30/08	0%	
<i>Notes</i>					
Data sets and time-line as per WP2					
53	M3.1a	Mon 9/3/07	Mon 10/1/07	0%	
<i>Notes</i>					
Data sets of major gas lines and exchange flows between and into Western Europe.					
108	Milestones	Mon 9/3/07	Mon 12/29/08	0%	
109	M6.1	Mon 9/3/07	Mon 10/1/07	0%	
<i>Notes</i>					
Network data available as per WP2 (up to M9)					