## **Tuesday, October 13**

10:00	Welcome and coffee		
	Welcome session		
10:30	Opening addresses François Avellan (deputy head SCCER-SoE)		
10:35	Keynote on "KWO Activities"  Benno Schwegler (head project development)		
11:00	Keynote on "The Energy Strategy 2050 and challenges for hydropower and geothermal sectors"  Christian Bühlmann (Swiss Federal Office for Energy, stv. Leiter Energieversorgung und Monitoring)		
11:30	Keynote on "Challenges, environment and organisation"  Ueli Wieland (manager of the SCCER-SoE)		
12:15	Lunch break		
	Session 1 – Introduction to Geothermal Resources and Geothermal Research Problems Chair: T. Driesner		
13:30	Types of Geothermal Resources, Power Production, and Research Problems Thomas Driesner		
14:30	Lessons learned from previous Enhanced Geothermal Systems Projects Speaker to be announced		
15:00	Research on Hydraulic Stimulation at the Grimsel Underground Laboratory Florian Amann Discussion		
15:30	Coffee break		
	Session 2 – Hydropower Chair: F. Avellan		
16:00	Adaptation of Swiss hydropower infrastructure to meet future needs Pedro Manso (EPFL-LCH)		
16:45	La stratégie énergétique 2050 et l'implementation de la Loi de Protection des Eaux Judith Money-Ueberl (Canton de Berne)		
17:15	Hydropower machinery: development & perspectives François Avellan (EPFL-LMH) Discussion		
18:30	Ice breaker		
19:30	Dinner		

## Wednesday, October 14

	Hydropower		Geo-Energies		
	Session 3 – Tasks 2.1 & 2.5 Chair: M. Stähli		Session 3 – Tasks 1.1 Chair: T. Driesner		
8:00	Future water and sediment from glaciers and alpine areas: perspectives for HP  Daniel Farinotti & Manfred Staehli (WSL)	8:00	8:00		Geothermal Resources in the Swiss underground - fundamental concepts and exploration strategies
9:15	Design of hydropower system operation: challenges and methods  Daniela Anghileri (ETHZ-IfU)				Martin Saar (ETHZ EGG) and Andrea Moscariello (UniGe)
10:15	Coffee break	10:00	Coffee break		
	Session 4 – Tasks 2.4 & 2.3 Chair: P. Manso	10:30	underground - fundamental concepts	Geothermal Resources in the Swiss underground - fundamental concepts and exploration strategies	
10:45	Selecting sites for small hydropower – trade-offs between power production and stream ecology  Christine Weber & Martin Schmid (Eawag)		Martin Saar (ETHZ EGG) and Andrea Moscariello (UniGe)		
11:45	Reservoir sedimentation and sustainability of hydropower Anton Schleiss (EPFL-LCH)				
12:15	Sustainable reservoir operation using sediment bypass tunnels Robert Boes (ETHZ-VAW)				
12:30	Reducing hydro-abrasive wear at turbines João Fernandes (ETHZ-VAW)				
12:45	Lunch break	12:30	Lunch break		
	Session 5 – Task 3.2 Chair: V. Hasmatuchi		Session 4 – Task 1.2 Chair: T. Driesner		
13:45	Small Hydro : State of the art and performance measurements Vlad Hasmatuchi (HES SO Valais)	13:30	Coupled thermo-hydro-mechanical processes in geothermal systems Part 1 Lecture		
14:15	Sustainable exploitation of small hydro Loïc Andolfatto (EPFL LMH)		Thomas Driesner (ETHZ IGP) et al.		
14:45	HPP performance and flexible operation towards lean integration of new renewable energies				
45.45	Andres Müller (EPFL LMH)				
15:15	Numerical Simulation of cavitation in turbomachines				
	Jean Decaix (HES SO Valais)				

16:15 17:15	Session 6 – Tasks 2.3 & 2.2 (Chair: To be announced)  Dam safety in Switzerland considering natural hazards like floods and earthquakes G. Darbre (SFOE)  Impact of market conditions on the short-& long-term operation of HPPs, Future operation strategies of HP systems Hannes Weigt (UniBasel)	15:10	Coupled thermo-hydro-mechanical processes in geothermal systems Part 2 Practicals  Thomas Driesner (ETHZ IGP)
18:30		Dinner	

## **Thursday, October 15**

	Hydropower		Geo-Energies
	Session 7 – Tasks 2.1 & 2.3		Session 5 – Task 4.1
	Chair: B. Schaefli		Chair: T. Driesner
8:00	Local climate scenarios via stochastic downscaling techniques  Nadav Peleg (ETHZ-IfU)	8:00	Induced seismicity during hydraulic stimulation of geothermal reservoirs Lecture and practicals
8:30	,	-	Dimitrios Karvounis (Swiss Seismological Service)
	Martin Bolliger (Alpiq)		
9:00	Hydropeaking mitigation		
	Philipp Meier (Eawag)		
9:15	On the economical and the ecological efficiency of SHPP		
	Stefania Tron (EPFL-AHEAD)		
9:30	Dam and reservoir level heightening		
	Pedro Manso (EPFL-LCH)		
9:45	Risk assessment of impulse waves in reservoirs		
	Lukas Schmocker (ETHZ-VAW)		
10:00	Coffee break	10:00	Coffee break
10:30	Fish downstream migration	10:30	The EGS project at Haute Sorne, canton Jura
	tbc	_	P. Meier (Geo-Energie Suisse)
10:45	Fine sediment management in Alpine reservoirs		T. Wold (GGG Energic Galact)
	J. Jenzer-Althaus (IUB)		
11:05	Hongrin-Leman PSP repowering with optimal usage of existing waterways and surge shafts		
	C. Nicolet (Powervision)		
11:50	Pump-turbines for Nant de Drance and Linthal projects		
	A. Schwery (Alstom R&D)		
12:15		Lunch break	
	Session	1 8 – Tasks 4	1.1 & 4.2
	Chair: P. Burgherr		
13:15	Comparative Risk Assessment in the Energy Sector: Safe, Secure and Sustainable Energy Supply Peter Burgherr (PSI)		
14:05	Social Acceptance and Risk Governance Michael Stauffacher (ETHZ USYS)		
14:55	Environmental Impacts of Energy Technologies		
	Chris Mutel (PSI)		
15:45	Chris Mutel (PSI)	Coffee breal	<b>(</b>

16:15	Scenario Analysis in Energy Economic Modeling Kannan Ramachandran (PSI)	
17:05	Integrated Sustainability Assessment Peter Burgherr (PSI)	
18:30	Dinner	

## Friday, October 16

	Hydropower		Geo-Energies
	Excursions Chair: U. Wieland		
7:45	Power house and dam of Grimsel 2	7:45	NAGRA Grimsel test site
10:15	Exchange of the groups / sites		
10:15	NAGRA Grimsel test site	10:15	Power house and dam of Grimsel 2
12:30	Packed lunch		
13:00	Departure of the bus to Innertkirchen		