

공무국외출장 개요

주관부서	전력계통본부 계통운영처 계통기술팀						
출장기간	2025.05.10.(토) - 2025.05.16.(금) (6박 7일간)						
여 행 국	노르웨이(트론하임)						
출장목적	CIGRE Trondheim Symposium 2025 참석						
대 상 자	소속	직급	성명	성별	연령	출장경비	
						금액(원)	부담기관
	계통기술팀	2	송태용	남	52	5,404,094	전력거래소
	계통기술팀	3	주원	남	39	5,532,004	전력거래소
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공무국외출장 타당성

출장의 필요성	<ul style="list-style-type: none"> ○ CIGRE Study Committee(SC) C2(Power System Operation and Control) 한국 대표로 SC Member Meeting 참석 ○ CIGRE Trondheim Symposium 2025 논문 발표
동일사유 국외출장 실시여부	<ul style="list-style-type: none"> ○ CIGRE Paris Session 2024(2024.08)
방문국 및 방문기관의 선정이유	<ul style="list-style-type: none"> ○ CIGRE Trondheim Symposium 2025 개최 장소
출장대상자 선정방법	<ul style="list-style-type: none"> ○ CIGRE Study Committee 위원 - 송태용 ○ CIGRE Symposium 논문 발표자 - 주원

국 외 출 장 계 획 서

1. 출장개요

출장목적	CIGRE Trondheim Symposium 2025 참석						
출장기간	2025.05.10.(토) - 2025.05.16.(금)						
출장국가	노르웨이(트론하임)						
방문기관	CIGRE Trondheim Symposium 2025						
출 장 자	소 속	직 급	성 명	성 별	연 령	출 장 경 비	
						금액(천원)	부담기관
	계통 기술팀	2	송태용	남	52	5,404,094	전력거래소
	계통 기술팀	3	주원	남	39	5,532,004	전력거래소
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	소계						10,936,098
기타	국제협력업무 추진경비					0	전력거래소
	잡손실					0	전력거래소
	소계					0	전력거래소
합계						10,936,098	전력거래소

2. 출장일정

월 일 (요일)	출발지	도착지	방문기관	업무수행내용 (수집할 자료목록, 질의할 내용 등)	접촉예정인물 (직책포함)
5.10.(토)	나주	인천	-	<input type="checkbox"/> 국내 이동(나주 → 인천, KPX) <input type="checkbox"/> 출국(인천 21:50 → 트론하임 09:30+1일)	-
5.11(일)	인천	트론하임	CIGRE	<input type="checkbox"/> CIGRE Symposium 장소 이동 (트론하임공항 → Clarion Hotel & Congress Trondheim)	-
5.12.(월)	-	-	CIGRE	<input type="checkbox"/> Tutorials & Workshops 참석 (송태용, 주원) - C2 / B4 Tutorial - C4 / C2 Tutorial	CIGRE 회원 및 Symposium 참석자
5.13.(화)	-	-	CIGRE	<input type="checkbox"/> Tutorials & Workshops 참석 (송태용, 주원) - Joint SC C2 / C4 session Power System Stability in IBR Dominated Grids	
5.14.(수)	-	-	CIGRE	<input type="checkbox"/> Tutorials & Workshops 참석 (송태용, 주원) - SC C2 session #1~4 <input type="checkbox"/> Study Committee C2 - 주원 차장 논문 발표(10:30 - 12:30)	
5.15.(목)	트론하임	인천	-	<input type="checkbox"/> 귀국(트론하임 09:00 → 인천 11:20+1일)	-
5.16.(금)	인천	나주	-	<input type="checkbox"/> 국내 이동(인천 → 나주, KPX)	-

※ 2인 이상이 동행하는 경우는 개인별 업무수행내용을 구체적으로 명시

출장자	업무수행내용
송태용	CIGRE Study Committees Member Meeting 참석
주원	CIGRE Study Committee 논문 발표

3. 출장경비

성명	계	항공운임		체재비			준비금	교육비	기타*
		항공사	금액	일비	식비	숙박비			
송태용	5,404,094	핀에어	1,941,800	288,277	300,889	1,019,298	0	0	1,853,830
주원	5,532,004	핀에어	1,941,800	288,277	300,889	1,019,298	0	0	1,981,740
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성명	업무 항공마일리지 활용 내역			미활용 사유					
	보유 마일리지**	활용 마일리지							
송태용	0	-	마일리지 부족						
주원	0	-	마일리지 부족						
-	-	-	-						
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-	-	-	-						

※ 2인 이상이 동행하는 경우는 개인별 출장경비 내용을 구체적으로 명시

* 기타 경비는 국내 교통비, 여행자보험료, ESTA 수수료 등 포함

** 이용 항공사 보유 마일리지 기준

4. 출장효과

□ 목적

- CIGRE Study Committee 참석을 통한 글로벌 전력산업 동향 파악 및 의견 공유
- CIGRE Symposium 논문 발표를 통한 국내 전력 계통운영 현황 및 기술 공유

□ 내용

- CIGRE Study Committees 및 Member Meeting 참석
 - C2 : Power System Operation and Control(한국 C2 대표 : 송태용 팀장)
- CIGRE Symposium 논문 발표
 - The Various Constraint Relief Strategies of South Korea's Massive Generation Surplus Areas(발표자 : 주원 차장)

□ 기대효과

- CIGRE Symposium 참석을 통한 해외 계통운영 관련 기술 동향 파악 및 노하우 공유를 통해 국내 계통운영방안 고도화에 활용 가능
- 논문 발표를 통하여 국내 전력계통 현황 및 이슈 공유 및 KPX 운영 기술 공유

5. 해외사무소 협조

※ 해당 없음

공무 국외 출장 계획서

1. 목적

- CIGRE Study Committee 및 Member Meeting 참석
- CIGRE Trondheim Symposium 2025 논문 발표

2. 출장개요

가. 기 간 : 2025.05.10.(토) ~ 05.16.(금) [6박 7일]

나. 출장지 : 노르웨이 트론하임

다. 출장자 : 계통기술팀 팀장 송태용, 차장 주원

라. 소요예산 : 10,936,098 원

- 7,377,098 원 (여비교통비/해외업무수행여비)
- 3,559,000 원 (협회비)

※ 상세 산출내역 붙임자료 참조

마. 주요일정

일 시	내 용	비고
5.10.(토)	□국내 이동(나주 → 인천) □출국(인천 21:50 → 트론하임 09:30+1일)	
5.11.(일)	□CIGRE Symposium 장소 이동	
5.12(월)	□Tutorials & Workshops (C2/B4 Tutorial, C4/C2 Tutorial) 참석	
5.13(화)	□Tutorials & Workshops(Joint SC C2 / C4 session) 참석	
5.14(수)	□Tutorials & Workshops(SC C2 session #1~4) 참석 □Study Committee C2 논문 발표(주원 차장)	
5.15(목)	□귀국(트론하임 09:00 → 인천11:20+1일)	
5.16(금)	□복귀(인천 → 나주)	

바. 주요 내용

□ CIGRE Study Committee 및 Member Meeting 참석

- C2 : Power System Operation and Control(한국 대표 : 송태용 팀장)
- 계통 운영 관련 기술 및 글로벌 전력산업 동향 파악, 의견 공유

□ CIGRE Trondheim Symposium 2025 논문 발표

- The Various Constraint Relief Strategies of South Korea's Massive Generation Surplus Areas(발표자 : 주원 차장)
- 국내 전력계통 운영 현황 및 기술 공유

- 붙임 1. 소요예산 산출명세서 및 산출근거
2. 일자별 행사 참여계획
 3. CIGRE Study Committee 한국대표 명단
 4. CIGRE Symposium 2025 프로그램
 5. 항공권 및 보험료(Invoice)
 6. 지정호텔 예약 정보
 7. 등록비 관련 증빙. 끝.

[붙임 1]

소요예산 산출명세서

1. 총 소요예산 : **₩ 10,936,098**

2. 적용기준

가. 국외여비 적용 등급 : “나”등급 (노르웨이) (단위 : US\$)

자격	일비	숙박비 ^{주1)}	식비
직원	30	실비(상한액: 137)	59

주1) 총무규정 제21조(국외출장 여비) 3. 숙박비 및 식비는 업무형편 또는 기타 부득이한 경우에는 기준금액의 5할 범위 이내에서 추가지급 할 수 있으며, 국제회의 참석 시 주최 측에서 숙소를 지정한 경우에는 숙박비를 실비로 지급한다. 이 경우 귀국일로부터 2주일 이내에 법인카드 또는 신용카드 등의 사용 시 받은 매출전표에 세부사용내역이 명시된 증빙서류를 첨부하여 정산신청을 하여야 한다. (2015. 4. 13 개정)

3. 세부내역

가. 교통비 : **₩ 4,077,600**

○ 1,941,800원/인(핀에어, 인천-트론하임 항공권)(붙임5 참조) × 2인
+ 48,500원/인(나주-서울 KTX) × 2회 × 2인 = **₩ 4,077,600**

나. 일 비 : **₩ 576,554**

○ (30\$/인 × 2인) × 6일 × 1,462.65원/\$(해외)
+ (25,000원/인 × 2인) × 1일(국내) = **₩ 576,554**

다. 숙박비 : **₩ 2,038,596**

○ NOK1,790(해외 지정 숙소) × (2인 × 4박) × 142.36원/NOK(해외)
= **₩ 2,038,596**

라. 식 비 : **₩ 601,778** (기내식 4식 및 호텔 조식 4식 제외)

○ (59\$/인 × 2인) × 1일/3식 × 9식 × 1,462.65원/\$(해외)^{주2)}
+ (25,000원 × 1일 + 17,000원) × 2인(국내)^{주3)} = **₩ 601,778**

주2) (해외) 5월 11일~14일 2식×4일 = 8식, 5월 15일 1식, 주3) (국내) 5월 10일 3식, 5월 16일 중식, 석식

마. 여행잡비 : ₩ 82,570

- 여행자 보험료(붙임5 참조) : 송태용 팀장, 주원 차장
- 48,510원(송태용) + 34,060원(주원) = **₩ 82,570**

바. 협회비 : ₩ 3,559,000

- 학회등록비(붙임7 참조) : (NOK 12,000(송태용, CIGRE 회원) +
NOK 13,000(주원, CIGRE 비회원)) × 142.36원/NOK = **₩ 3,559,000**

소요예산 산출근거(적용환율)

가. 하나은행 환율 고시 : 25년 4월 30일 기준

- 미국 USD : 1,462.65원
- 노르웨이 NOK : 142.36원

현재 환율

기준일 : 2025년 04월 30일 고시일시 : 2025년 05월 02일 07시 35분 32초 (1413회차) 조회시각 : 2025년 05월 02일 14시 05분 37초

통화	현찰				송금		외화 수표 파실때	매매 기준율	환가 료율	미화 환산율
	사실 때		파실 때		보낼 때	받을 때				
	환율	Spread	환율	Spread						
<u>미국 USD</u>	1,462.65	1.75	1,412.35	1.75	1,451.50	1,423.50	1,421.04	1,437.50	6.17422	1.0000
<u>일본 JPY (100)</u>	1,006.71	1.75	972.09	1.75	999.09	979.71	979.09	989.40	2.58227	0.6883
<u>유로 EUR</u>	1,656.25	1.99	1,591.63	1.99	1,640.17	1,607.71	1,605.85	1,623.94	4.12600	1.1297
<u>중국 CNY</u>	207.39	5.00	187.65	5.00	199.49	195.55	0.00	197.52	3.79591	0.1374
<u>홍콩 HKD</u>	188.97	1.97	181.67	1.97	187.17	183.47	183.22	185.32	5.63900	0.1289
<u>태국 THB</u>	45.02	5.00	40.31	6.00	43.30	42.46	42.42	42.88	4.02500	0.0298
<u>대만 TWD</u>	50.61	13.10	40.28	10.00	0.00	0.00	0.00	44.75	3.58700	0.0311
<u>필리핀 PHP</u>	28.30	10.00	23.63	8.20	25.98	25.48	0.00	25.73	7.82000	0.0179
<u>싱가포르 SGD</u>	1,118.31	1.99	1,074.67	1.99	1,107.45	1,085.53	1,084.27	1,096.49	4.66333	0.7628
<u>호주 AUD</u>	935.55	1.97	899.41	1.97	926.65	908.31	906.74	917.48	6.25466	0.6382
<u>베트남 VND (100)</u>	6.20	11.80	4.90	11.80	5.60	5.50	0.00	5.55	6.52833	0.0039
<u>영국 GBP</u>	1,947.34	1.97	1,872.10	1.97	1,928.81	1,890.63	1,887.23	1,909.72	6.50433	1.3285
<u>캐나다 CAD</u>	1,058.23	1.97	1,017.35	1.97	1,048.16	1,027.42	1,026.08	1,037.79	4.68666	0.7219
<u>말레이시아 MYB</u>	357.79	7.40	308.49	7.40	0.00	329.81	0.00	333.14	5.25866	0.2317
<u>러시아 RUB</u>	19.19	9.50	14.47	17.50	18.14	16.92	0.00	17.53	2.97500	0.0122
<u>남아공화국 ZAR</u>	83.58	8.00	71.20	8.00	78.31	76.47	0.00	77.39	9.51600	0.0538
<u>노르웨이 NOK</u>	142.36	3.30	129.97	5.70	139.19	136.45	136.21	137.82	6.52666	0.0959

[붙임 2]

일자별 행사 참여계획

시간	5.10. (토)	5.11. (일)	5.12. (월)	5.13. (화)	5.14. (수)	5.15. (목)	5.15. (금)	
00:00~ 09:00	국내이동 (나주 → 인천)	↓ 트론하임 (09:30)	일정 준비	일정 준비	일정 준비	호텔 → 공항	↓ 인천 (11:20)	
09:00~ 10:00			C2 / B4 Tutorial	Opening Session	SC C2 session #1			
10:00~ 11:00			C4 / C2 Tutorial	Joint SC C2 / C4 session	SC C2 session #2 (논문 발표)			
11:00~ 12:00		현지 이동 (공항 → 호텔)						
12:00~ 13:00								
13:00~ 14:00			CIGRE SC 및 심포지엄 준비	Tutorials & Workshops 참석	Tutorials & Workshops 참석	SC C2 session #3	귀국 트론하임 (09:00) ↓	국내이동 (인천 → 나주)
14:00~ 15:00						SC C2 session #4		
15:00~ 16:00				저녁 및 휴식	저녁 및 휴식	저녁 및 휴식		
16:00~ 17:00								
17:00~ 18:00								
18:00~ 19:00								
19:00~ 20:00								
20:00~ 21:00								
21:00~ 24:00	출국 인천 (21:50)							

CIGRE Study Committee 한국대표 명단



TECHNICAL DOMAINS
SC 한국대표

대한민국을 대표하는 총 16명의 SC 한국대표는(13 Regular members, 3 Observer members) 분야별로 30여개 국가 대표와 네트워크 구축 및 기술교류를 통해 대한민국의 위상을 높이고 국내 기술발전에 기여하고 있습니다.

SC 한국대표 역할

- 매년 SC Member Meeting 참석을 통해 국내 위원회 및 국내 관련 분야의 관심과 요구 사항 전달
- 국내 전문가의 국제적 네트워크 구축
- SC 활동 상황 및 결과에 대해 국내위원회 및 관련 연구회로 전파
- SC Working Group 참여 및 국내 전문가 추천 권한
- Symposium, Colloquium 등 지역 회의 기획, 조직 및 참여와 활동

SC 한국대표 명단

Group A Equipment	Group B Technologies	Group C Systems	Group D New materials and IT			
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* RM : Regular Member, OM: Observer Member

SC	Field of Activity	Affiliation	Name	M	Year
C1	POWER SYSTEM DEVELOPMENT AND ECONOMICS	한국전력공사	곽은섭 실장	OM	2022
C2	POWER SYSTEM OPERATION AND CONTROL	전력거래소	송태용 팀장	RM	2024
C3	POWER SYSTEM ENVIRONMENTAL PERFORMANCE	한국전기연구원	주문노 본부장	RM	2020
C4	POWER SYSTEM TECHNICAL PERFORMANCE	일진전기	김정찬 상무	OM	2024
C5	ELECTRICITY MARKETS AND REGULATION	전력거래소	김진이 팀장	RM	2022
C6	ACTIVE DISTRIBUTION SYSTEMS AND DISTRIBUTED ENERGY RESOURCES	한국전기연구원	김슬기 연구위원	RM	2022

CIGRE Symposium 2025 프로그램



TECHNICAL PROGRAM (Draft 15th March 2025)

The theme for the CIGRE Trondheim Symposium is **CHANGES NEEDED IN THE POWER SYSTEM for the Energy Transition**. The aim is to provide a forum for recent research results, planning and system operations experience related to the changes the power system is undergoing because of the energy transition.

The symposium is organized and supported by eleven CIGRE Study Committees: **SC A3** Transmission and distribution equipment, **SC B1** Insulated cables (co-lead), **SC B2** Overhead lines, **SC B3** Substations and electrical installations, **SC B4** DC systems and power electronics, **SC B5** Protection and automation, **SC C2** Power system operation and control, **SC C3** Power system sustainability and environmental performance, **SC C4** Power system technical performance (co-lead), **SC C6** Active distribution systems and distributed energy resources, **SC D2** Information systems telecommunications and cybersecurity. A description of each Study Committee can be found at the end of this program.

The theme of the symposium is divided into two topic streams:

PS1: Integration of renewable energy resources to the grid

- Environmentally friendly power grid and its equipment
- New applications and technologies applied to AC and DC onshore and offshore grid
- AC and DC onshore and offshore grid
- AC grid development, protection of the future meshed AC and DC system
- Sector integration including hydrogen, EV, energy hubs, DER
- Services/operation applied to AC and DC onshore and offshore grid
- Monitoring the system applied to AC and DC onshore and offshore grid
- Maintenance and Services applied to AC and DC onshore and offshore grid

PS2: Technologies supporting the power grid for energy transition to carbon neutral energy production

- Requirements for power grid and its equipment
- Inverter based control interacting with existing system and Converter stability issues (resonance stability, converter driven stability)
- Coordination between AC and DC networks
- Grid forming
- Multivendor interoperability
- New modelling tools
- Planning and operation of lower inertia system
- System analysis (technical)
- Black start and resilience aspects including DER integration
- Optimize and increase the capacity of the energy transmission network
- Reliability and security – critical infrastructure

This technical program covers the public sessions available to delegates to the CIGRE Trondheim International Symposium **May 12–15, 2025**. There are many other meetings taking place of Working Groups and Study Committees. Members of these groups will be issued a detailed schedule.

<https://cigrenrccsymposium2025.com/>
May 12–15, 2025

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Monday 12th of May : Tutorials & Workshops

Time	Room 1	Room 2	Room 3	Room 4
08:00	A3/B5 Tutorial: Modern Instrument Transformers for Protection Applications	C4 Tutorial: Modelling of Inverter Based Resources and Distributed Energy Resources for System Analysis	C2/B4 Tutorial: The Impact of Offshore Wind Power hybrid AC/DC Connections on System Operations and System Design	B2 Tutorial: Forecasting Dynamic Thermal Line Ratings
10:00	Coffee break			
10:30	B5 Tutorial: Protection and Metering Advancements in the Evolving Power System	C4/C2 Tutorial: Recent Advancements in Technology and Applications of Synchrophasor Measurements	B4 Tutorial: Interoperability in HVDC systems based on partially open-source software	A3 Workshop: Digitalization of Information for T&D Equipment
12:30	Lunch			
13:30	B1 Tutorial: Condition Evaluation and Lifetime Strategy of HV Cable Systems	B3 Tutorial: Review of Substation Busbar Component Reliability	B4 Workshop: InterOPERA at Crossroads: Advancing Multi-Vendor HVDC Interoperability	C1/B4 Tutorial: Offshore Transmission Planning
15:30	Coffee break			
16:00	C3 Tutorial: Best Environmental and Socio-Economic Practices for Improving Public Acceptance of High Voltage Substations	C6 Workshop: DSO Tools and Practices for Operating Active Distribution Networks	B4/C4 Workshop: Modelling and Tools for Resilient Power Systems Design - a HVDC-WISE Workshop	D2 Workshop Cybersecurity Perspectives on Regulation, Standards, and Technical Developments
18:00	Welcome reception			

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Tuesday 13th of May: Technical Paper Sessions (i)

Time	Room 1	Room 2	Room 3	Room 4	Room 5
08:00	Opening Session				
09:30	Coffee break				
10:30	SC A3 session #1 Switchgear technology, reliability and condition assessment	SC B5 session #1 Protection, Automation and Control System engineering and design aspects	SC B4 session #1 DC-Hub, DC-Grid & Multi-Terminal HVDC	Joint SC C2/C4 session Power System Stability in IBR Dominated Grids	SC C6 session #1 DER Impact on Distribution Systems
12:30	Lunch				
13:30	SC A3 session #2 Transformers and Instrument Transformers	SC B5 session #2 Protection implementation experience - schemes, settings & testing	SC B4 session #2 HVDC Planning, Design, Standardization	SC C4 session #1 Instability and Oscillations in Inverter Dominated Power Systems	SC C6 session #2 Microgrid and BESS applications
15:30	Coffee break				
16:00	SC C3 session #1 Integrating sustainability criteria into network planning, project design and construction	SC B5 session #3 Impact of Renewable Energy Sources and Inverter Based Resources on network protections	SC B4 session #3 Energy Storage, HVDC Auxiliary Equipment and Components	SC C4 session #2 Enhanced Models and Simulation Capabilities for Inverter Dominated Power Systems	SC C6 session #3 DER integration in Active Distribution Networks
20:00	GALA DINNER				

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Wednesday 14th of May: Technical Paper Sessions (ii)

Time	Room 1	Room 2	Room 3	Room 4	Room 5
08:00	SC B2 session #1 Towers and foundations design and maintenance	SC B1 session #1 Insulated Cables (1)	SC C2 session #1 System Operational Challenges and Experiences with Integration of Renewables	SC C4 session #3 Power Quality, Transients and EMC Challenges in the Energy Transition	SC D2 session #1 Information systems and services 1
10:00	Coffee break				
10:30	SC B2 session #2 Conductors and fittings, crossings, vibrations and icing	SC B1 session #2 Insulated Cables (2)	SC C2 session #2 Tools and Methods for Congestion Management and Operational Planning	SC C4 session #4 Dynamic Performance of Power Systems in the Energy Transition	SC D2 session #2 Information systems and services 2 Cybersecurity 1
12:30	Lunch				
13:30	SC B3 session #1 Substations and electrical installations – 1	SC B1 session #3 Insulated Cables (3)	SC C2 session #3 Inertia Monitoring, DSA and other Tools for Enabling System Operations with Increasing IBR	SC C4 session #5 Enhanced Solution Methods for Performance Analysis of Modern Power Systems	SC D2 session #3 Cybersecurity 2 Telecommunications 1
15:30	Coffee break				
16:00	SC B3 session #2 Substations and electrical installations – 2	SC C3 session #2 Power infrastructure and biodiversity Technology to reduce environmental impact	SC C2 session #4 Ancillary Services and Control in Power Electronics Dominated Power Systems	Joint SC B4/C4 session Grid Forming, analysis methodologies	SC D2 session #4 Telecommunications 2
18:00	Closing				
Technical Tour					

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Symposium 2025
Trondheim, Norway



ID: 1283

The Various Constraint Relief Strategies of South Korea's Massive Generation Surplus Areas

keywords: Constraint Relief, Generation Constraints, Renewable Energy, Special Protection Schemes (SPS), Static Synchronous Compensators (STATCOM), Thyristor Controlled Series Capacitors (TCSC)

Joo, Won; Song, Tae-Yong; Choi, Hong-Seok
Korea Power Exchange (KPX)

ID: 1110

Robustness indicators for the Nordic power system

keywords: Robustness, Resilience, Transfer Corridors, Utilisation, Availability

Hillberg, Emil; Lindquist, Tommie; Bengtsson, Gustaf; Weihs, Erik
RISE Research Institutes of Sweden, Sweden

ID: 1170

Outage planning in a converter dominated grid – A Finnish case study and lessons learned

keywords: Converter Stability, Curtailment, Outage Planning, Power System Operation

Nikkilä, Antti-Juhani; Mäkihannu, Tuomo; Salonen, Otso; Klaver, Samuel; Hytti, Valteri; Peltoketo, Suvi; Korhonen, Riku
Fingrid Oyj, Finland

ID: 1351

Demand Simulator of energy transition variables for the Spanish electric power system

keywords: Energy Transition, Self-Consumption, Electric Vehicle, Green Hydrogen, Heat Pump

del Río Molina, María Cruz; Rodríguez Aparicio, Ana
Red Eléctrica, Spain

10:30 – 12:30 (Room-4) SC C4 session #4

Dynamic Performance of Power Systems in the Energy Transition

Study Committee C4 - Power system technical performance

ID: 1411

Impact of Voltage Difference between IBRs and Point of Interconnection on Design and Performance of Renewable Plants

keywords: Renewable, Collector system, Voltage drop, Low voltage ride through, High voltage ride through

Kishan, Raj; Jain, Priyam; Dash, Gaurab; Singh, Gaurav; Saha, Arpan; Shukla, Rahul; Pandey, Vivek
Grid Controller of India limited, India

ID: 1163

Investigation of Inertia Services on Grid Stability with Low-Inertia Systems in Victoria

keywords: Victorian Network, AEMO, Low Inertia, Inertia Services, Grid Forming Inverters, Grid Following Inverters, Synchronous Generators, Synchronous Condensers, EMT Modelling, System Planning, System Strength

Srimannarayanan, Shriramaprasad; Caspersz, Nathan
AEMO, Australia

<https://cigre-nrccsymposium2025.com/>

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[붙임 5]

항공권 및 보험료(Invoice)

(주)그린프로젝트투어

Green Project Tour Co.,Ltd

서울 성동구 왕십리로 410, 센트라스153타워 601호 ■ #601, Centlas153Tower, 410, Wangsimni-ro, Seongdong-gu, Seoul, Korea
Tel: 02- 776-1444 ■ Fax : 02-755-8668 ■ greenproject@hanmail.net

INVOICE (請 求 書)

T O : 전력거래소
FROM : (주) 그린프로젝트투어 DATE : 2025.04.25
이 현옥실장

NAME : 1.SONG/TAEYONG MR 2.JOO/WON MR

ROUTING :

10.MAY	인천 헬싱키	AY 042	21:50	05:20+1DAY
11.MAY	헬싱키 트론하임	AY 947	08:25	09:30
	OPERATED BY NORDIC REGIONAL AIRLINES OY			
15.MAY	트론하임 헬싱키	AY 948	09:00	12:00
	OPERATED BY NORDIC REGIONAL AIRLINES OY			
15.MAY	헬싱키 인천	AY 041	17:30	11:20+1DAY

AIR FARE : ₩1,941,800 X 2 PAX = ₩3,883,600 (TAX 및 유류할증료 포함)
** ECONOMY CLASS / 왕복/항공권 발권 후 변경 및 취소 시 페널티가 있습니다. **

해외여행자보험료 : 34,060원 주원님/48,510원 송태웅님
(가입액 : 3억원)


합 계 : ₩3,966,170

사업자등록번호 : 104-81-53808
결제구좌 : 국민은행 815-01-0449-494 (주)그린프로젝트투어

This is to certify that the above fare is in accordance with tariffs and regulations.

Prepared by

서울특별시 성동구 왕십리로 410, 601호
(하정십리동, 센트라스153타워)
(주)그린프로젝트투어
TEL:(02)776-1444
대표이사 윤 승 원



지정호텔 예약 정보

Personal information

Attendance

Lunch at the hotel

Accommodation

Accommodation

We have reserved a number of rooms in various hotels at a special price for participants in the conference. You must book your accommodation through this site to get the conference rate.

The CIGRE NRCC conference hotel

Clarion Hotel Trondheim on Brattøra

Experience Clarion Hotel Trondheim on Brattøra, a vibrant new district that has become one of Trondheim's most important hubs. This city life in the fjord is truly unique, and guests at the hotel can enjoy the close proximity to the city's main attractions.

Fully booked 11th - 13th May.

Please take a look at Scandic hotel! Nidelven below.

Price per night incl. breakfast and Wifi:

Singleroom NOK 1690

Double room NOK 1940

We have reserved rooms at the conference price for the period May 9 - 18 2025. If you wish to stay longer at this hotel, we ask that you specify this in the comments field on the next page.

NEARBY the CIGRE NRCC conference hotel

Scandic hotel Solsiden

Solsiden is one of Trondheim's most popular and pulsating areas, with a wide selection of shops and restaurants and 15 minutes walk from the Conference hotel.

Price per night incl. breakfast and Wifi:

Singleroom NOK 1760

Double room NOK 2060

Scandic hotel Nidelven

The hotel is located in the centre of Trondheim, 17 meters out into the beautiful river Nidelven and 10 minutes walk from the Conference hotel.

Price per night incl. breakfast and Wifi:

Singleroom NOK 1760

Double room NOK 2060

등록비 관련 증빙

Personal information

Welcome to the registration site for CIGRE Symposium in Trondheim May 12 - 15, 2025, Norway.

Please enter your attendance for the conference:

Attendance: Symposium delegates ★
 Work group or SC meeting only (no entrance to Conference 12-14, 2025)
 Technical council
 Steering committee
 Student/Young under 35
 Companion (family/friends etc.)

Are you a member of CIGRE? Yes No ★

Are you a member of CIGRE Study Committees? Yes No ★

Do you need an Invitation Letter for a visa application? Yes No ★

Personal information:

First name ★

Last name ★

Company (use the shortened name) ★

Company address ★

Reference ★

ZIP code ★

City ★

Country ★

Cell phone ★

E-mail for invoice/Credit Card receipt ★

I want to appear on the list of delegate: Yes No ★

E-mail for information, visa etc. ★

Use an e-mail address that you know works outside the house. Some work e-mail addresses do not allow receiving e-mail from senders who are not approved by the workplace.

Price information

Super early, before 2024 October 1, 2024	NOK 8000*
Early bird, before January 6, 2025	NOK 9000*
Ordinary price, before April 10, 2025	NOK 10000*
Price late registration, after April 11, 2025	NOK 12000*
Companion, see companion program	

Extra fee for no-members, NOK 1000

Student/young, discount of NOK 1000

*Please be aware that on the invoice from Xtenso Event the amount may be split into several VAT rates due to Norwegian tax rules. 0% - 12% - 25%.

Personal information

When registering, you must state your name, contact information and affiliation. Information provided regarding name, company and country will appear on your name badge and on the list of delegates to be delivered to all delegates at the conference.

In addition, we ask you to provide information about any allergies and the need for accommodation. Personal information we receive when registering is only used to administer the conference. The information is kept and will only be used for history Xtenso Event and the organizers from CIGRE. Sensitive information will be deleted after the end of the event.

I agree: ★

Next