

# Appendix 2. List of abbreviations and acronyms

## Generation-IV specific acronyms

AMME-TF	Advanced Manufacturing Materials Engineering Task Force	PRPPWG	Proliferation Resistance and Physical Protection Working Group
EG	Experts Group	pSSC	provisional System Steering Committee
EMWG	Economic Modelling Working Group	RDTF	R&D Infrastructure Task Force
ETWG	Education and Training Working Group	RSWG	Risk and Safety Working Group
GIF	Generation IV International Forum	SA	System Arrangement
ISAM	Integrated safety assessment methodology (GIF RSWG)	SCWR	Supercritical-water-cooled reactor
MWG	Methodology working group	SDC	Safety design criteria
NEaNH TF	Non-Electric Applications of Nuclear Heat Task Force	SFR	Sodium-cooled fast reactor
PA	Project Arrangement	SIA	System integration and assessment
PD	Policy Director	SIAP	Senior Industry Advisory Panel
PG	Policy Group	SSC	System Steering Committee
PMB	Project Management Board	TS	Technical Secretariat

## Technical terms, projects and facilities

AF	Advanced fuel	ECC-SMART	Joint European Canadian Chinese – Small Modular Reactor Technology project
AFA	Alumina forming austenitic	ECS	Energy conversion system
AFR	Advanced fast reactor	ELFR	European lead fast reactor
AGR	Advanced gas-cooled reactor (US)	ESFR	European sodium fast reactor
ALFRED	Advanced Lead Fast Reactor European Demonstrator	ESFR-SMART	European sodium fast reactor – Safety Measure Assessment and Research Tools
ALLEGRO	The European Gas Fast Reactor Demonstrator Project	FFDL	Failed fuel detection and location
AMME	Advanced manufacturing and materials engineering	FLIBE	mixture of lithium and beryllium fluoride (BeF <sub>2</sub> )
AMR	Advanced modular reactor	FLiNaK	salt mixture of lithium fluoride, sodium fluoride and potassium fluoride
ANSTER	Advanced nuclear technology cost reduction strategies and systematic economic review	FOAK	First-of-a-kind
ASTRID	Advanced Sodium Technological Reactor for Industrial Demonstration	GFR	Gas-cooled fast reactor
BWR	Boiling water reactor	GW	Gigawatt
CD&BOP	Component design and balance of plant	GWD/MTHM	Gigawatt days per metric ton of heavy metal
CEFR	China experimental fast reactor	HEEP	Hydrogen Economic Evaluation Programme (IAEA)
CFD	Computational fluid dynamics	HINEG	High intensity D-T fusion neutron Generator
CFR	Chinese sodium fast reactor	HTGR	High-temperature gas-cooled reactor
CHP	Combined heat and power	HTR	High-temperature gas-cooled reactor
CMVB	Computational methods, validation and benchmarking	HTR-PM	High-temperature gas-cooled reactor – pebble-bed module
COVID-19	Coronavirus-19	HTSE	High-temperature steam electrolysis
DHR	Decay heat removal	HTTR	High-temperature test reactor
dpa	displacements per atom		

IRRS	Integrated Regulatory Review Service (IAEA)	PGSFR	Prototype Generation IV sodium-cooled fast reactor
ISI&R	In-service inspection and repair	PIE	Post-irradiation examination
JRC	Joint Research Centre (EU)	PWR	Pressurized water reactor
JSFR	Japanese sodium-cooled fast reactor	RANS	Reynolds-averaged Navier-Stokes (model)
KALIMER	Korea advanced liquid metal reactor	R&D	Research and development
LBE	Lead-bismuth eutectic	RD&D	Research development & demonstration
LES	Large eddy simulation (model)	SAMOSAFER	Safety assessment for fluid-fuel energy reactors
LFR	Lead-cooled fast reactor	SEM	Scanning electron microscopy
LOF	Loss of flow	SiCf/SiC	Silicon carbide fiber reinforced silicon carbide
LWR	Light water reactor	S-I	Sulfur-iodine (process)
MA	Minor actinides	SMR	Small modular reactor
MAT	Materials	SNETP	Sustainable Nuclear Energy Technology Platform
MBIR	Russian multipurpose fast neutron research reactor	SNF	Spent nuclear fuel
MCRE	Molten chloride reactor experiment	SRP	System research plan
MEACTOS	Mitigating environmentally-assisted cracking through optimisation of surface condition	SSTAR	Small, secure, transportable, autonomous reactor
MMR	Micro modular reactor	STELLA-2	Large-scale Sodium Integral Effect Test Facility
MOSART	Molten salt actinide recycler and transmuter	TH-U	Thorium-uranium
MoU	Memorandum of understanding	TMSR	Thorium molten salt reactor (China)
MOX	Mixed oxide (fuel)	TRISO	Tri-structural isotropic (nuclear fuel)
Mpa	megapascal	UCO	Uranium oxycarbide
MSFR	Molten salt fast reactor	UOX	Uranium oxide
MSR	Molten salt reactor	VHTS	Very high-temperature system
MW	Megawatt	VTR	Versatile test reactor (US)
MYRRHA	Multi-purpose hybrid research reactor for high-tech applications	VVER	Russian light water power pressurized reactor model
NEST	Nuclear Economics Support Tool (IAEA)	WGSAR	Working Group on the Safety of Advanced Reactors (NEA)
NUWARD	French PWR SMR Project		
ODS	Oxide dispersion-strengthened		

## Organizations, companies and agencies

ANL	Argonne National Laboratory (US)		Nuclear Reactors and Fuel Cycles (IAEA)
ASME	American Society of Mechanical Engineers	JAEA	Japan Atomic Energy Agency
ASN	Autorité de Sûreté Nucléaire (France)	JRC	Joint Research Centre (Euratom)
CAS	Chinese Academy of Science	KAERI	Korea Atomic Energy Research Institute
CEA	Alternative Energies and Atomic Energy Commission (France)	KIT	Karlsruhe Institute of Technology (Germany)
CIAE	China Institute of Atomic Energy	NCBJ	National Centre for Nuclear Research (Poland)
CNL	Canadian Nuclear Laboratories	NE	Office of Nuclear Energy (US)
CNNC	China National Nuclear Corporation	NEA	Nuclear Energy Agency
CNSC	Canadian Nuclear Safety Commission	NRC	Nuclear Regulatory Commission (US)
DOE	Department of Energy (US)	OECD	Organisation for Economic Co-operation and Development
EDF	Electricité de France	OPG	Ontario Power Generation (Canada)
EU	European Union	ORNL	Oak Ridge National Laboratory (US)
IAEA	International Atomic Energy Agency	PSI	Paul Scherrer Institute (Switzerland)
INET	Institute of Nuclear and New Energy Technology (China)	WEC	Westinghouse Electric Company
INL	Idaho National Laboratory (US)		
INPRO	International Project on Innovative		