RISK MANAGEMENT (ADAPTATION) OPTIONS CHECKLIST

Risk Management Type	Description / Examples
Building adaptive capacity	
Research and analysis	• Research and analysis is useful to reduce uncertainties prior to investing in costly risk management measures • Develop better understanding of the relationships between climate-related factors and the performance of assets • Develop in-depth integrated climate change risk assessments • Develop higher resolution data on future climate variability and climate change • Undertake cost-benefit analyses of risk management measures
Data collection and monitoring	• Monitor impacts of climate-related factors on performance of existing assets • Monitor new developments in climate change science
Changing or developing standards, codes, risk registers etc	• Amend standards, codes of practice for new projects to ensure they are resilient to / take account of changing climatic conditions: - For climate variables projected with high confidence, make precautionary allowances for climate change during front end engineering design, where these are low cost - For climate variables projected with medium or low confidence, undertake sensitivity tests of the design to changes • Incorporate climate-resilience into contracts and procurement processes • Consider climate-related risks and management in Environmental and Social Impact Assessments • Incorporate climate-related risks into Risk Registers
Awareness-raising and organisational development	• Undertake training, staff development and capacity building programmes • Identify climate change 'champions' • Staff attend conferences and events on climate change
Working in partnership	• Work in partnership with stakeholders to understand climate change risks and develop co-ordinated adaptation measures: - Governments, regulators, private sector, external infrastructure providers, contractors, suppliers, customers, local communities • Partnership working helps to avoid conflicts between different organisations' adaptation strategies
Delivering adaptation actions	
Transfer: Spread/ share risks	• Diversify asset types and technologies for new projects • Diversify locations of new projects • Transfer risks through contracts with suppliers, contractors • Take out insurance to cover potential risks • Use other financial products that lay-off risk, such as Alternative Risk Transfer mechanisms (ART) including risk bonds, futures, derivatives, swaps and options
Treat: Avoid negative impacts	• Consider climate resilience as part of site selection process for new projects – avoid locations where risks will be unmanageable • Implement climate-resilient design standards for new projects at front end engineering design • Implement engineering and technical solutions to build robustness against climate change for existing assets as part of routine refurbishment or upgrades • Integrate climate-related risks into contingency and disaster plans for new projects and existing assets
Tolerate: Accept risks	• Accept risks where they can not be managed or where cost-benefit analyses indicate that it is not worthwhile to make changes to existing assets
Terminate: Bear loss	• Bear losses where they can not be avoided – for instance, loss of coastal areas to sea level rise and/or increased rates of coastal erosion where risks are too expensive to rectify
Exploit opportunities	• Identify and develop new projects that are favoured by future climate change conditions, e.g. increased solar potential due to increased sunshine hours in some locations