RIZZO Associates is supporting GEN energija, d.o.o. (GEN) in several topical areas regarding licensing and selection of its Nuclear Power Plant (NPP) in Slovenia:

**Siting:** RIZZO has been providing independent integrated review and consulting in support to the site characterization efforts for the Krško NPP siting options. The field investigations were performed by a Consortium of French and Slovenian Partners. RIZZO has reviewed and commented on work plans, borehole locations, and results pertaining to geology, paleo-seismology, hydrogeology, seismic hazard assessment, geophysical, and geotechnical field investigations. The Client has requested RIZZO to take a more direct role in the Project.

**PSHA:** RIZZO conducted an evaluation of a Probabilistic Seismic Hazard Analysis (PSHA) by the French and Slovenian Seismic Expert Group, who had performed seismo-tectonic, geologic, geophysical investigations and a PSHA. RIZZO performed an independent evaluation of the PSHA in two stages:

1. Replicate results with RIZZO software by using the same set of input data with sensitivity adjustments to calibrate results.

2. Perform sensitivity analysis (with evaluation of seismic rates and evaluation of Earthquake Catalog data).

**Geophysical Testing:** RIZZO independently interpreted geophysical results for the larger site area. RIZZO provided a geotechnical, geological, and seismological review of the evaluation results. The evaluation collected high-resolution seismic (HRS) reflection data to investigate local subsurface geologic features and possible fault structures. RIZZO conducted an independent reassessment via reprocessing and subsequent interpretation of these seismic data.

**Licensing:** RIZZO is providing a Preliminary Safety reporting that is required to advance the Slovenian decision making process. This Report is a predecessor event in its approval process towards a next generation NPP application. The Report, entitled “A Preliminary Safety Analysis of New NPPs for Decision Making (PSADMP),” covers: site description; site characterization, inclusive of site demography and geography; site hazards; meteorology; site hydrology and geohydrology; site geology/geotechnical/seismic; accident analysis; and emergency planning. The threat of high water on the Save River is a challenge to the siting of the NPP. A surrogate Reference Plant “Plant Parameter Envelop (PPE)” was developed by RIZZO to cover key siting parameters and to envelop four select PWR designs, e.g., EPR (Areva), APWR (MHI), AP1000 (WEC) and ATMEA1 (Areva and MHI cooperation). The content of the PSADMP covered several of the chapters of a Safety Analysis Report (SAR) based upon the constraints imposed by the PPE.
Probabilistic Fault Displacement Hazard Analysis: RIZZO is performing a PFDHA for the East and West Sites for the proposed Krško 2 NPP. Seismic sources are characterized in terms of their locations, geometries, rates of activity, and magnitude distributions. Future fault displacements can be inferred from the magnitudes of earthquakes expected to occur, or directly from the evidence of past fault displacements. The magnitude of secondary faulting that occurs away from the primary rupture must be characterized as a function of magnitude and distance. Knowledge uncertainties are addressed by assessing alternate interpretations through a Logic Tree Approach. The analysis addresses potential fault displacement associated with fault movement on the Libna, Artice, and Orlica faults.