BGS Plans for remaining years on SWIGS

Refine pipeline model

* Interaction with industry and/or industry journals (Pipe diameters, thickness, coating conductance…)
* Scenario testing (historical, hypothetical) -> where are the hotspots?
* Translate PSP to corrosion rate and pipe lifetimes (c.f. work that Malcolm did in NZ and showed at a previous BGS seminar)?

Explore railway modelling (*speculative*)

* International lead is David Boteler (NRCan), who wishes to engage with us on this
  + Electrical model of track circuits in ‘problem’ areas of UK

Power transmission

* We have added 33kV, 60kV systems in transmission system
* GIC differences now at ~10% difference level
* Only major changes foreseen
  + Shapefile data for accurate transmission line paths
  + Transformer grounding resistances
* Inductance?
  + For 1-60 sec B fields

Electric field model

* Refining Earth conductivity models
* Validation
* 3D

Forecast GIC

* Suggest we try GORGON test runs of historical data to test any forecast capability for UK
  + October 2003, March 2015
  + ‘What if’ scenario: July 2012 ‘Super-CME’ solar wind data

GIC Services

* Forecast capability
* GIC activity index: going beyond Kp=9 (in association with Met Office and National Grid)

GIC monitoring

* Complete DMM fieldwork
* Validate & modify power grid model
* ?