

WBS 1 Requirements

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Issues from July meeting

- ¥ Implementation of change control
- ¥ Finalizing initial diagnostic and heating complement consistent with initial experimental objectives
- ¥ Defining constraints derived from re-using test cell
- ¥ Re-defining reference scenarios as motivated by simulations, review of volt second requirements, need for controlled rampdown, etc.
- ¥ Providing coil constraints to physics for scenario and flexibility modeling
- ¥ Refining requirements for flexibility (and maximum plasma current) based on assessment of design impacts
- ¥ Adding more dimensions to flexibility space as required to fulfill NCSX experimental objectives (currently only 3 dimensions)
- ¥ Flexibility requirements for PFCs and ancillary systems are TBD

Review of amplified requirements

¥ Modular coils provide pattern

¥ Other coils systems to follow pattern

¥ VV/PFCs next

Issues from review of coil requirements

- ¥ Coil geometry specified at room temperature (not cold, not deflected)
- ¥ No time constants specified, only the inclusion of toroidal breaks which preserve stellarator symmetry (3 minimum)
- ¥ Controlled project data files to be provided to establish coil centroids and current waveforms
 - Sufficient points must be used such that the short filament approximation used by Physics and the spline fit approximation used by Engineering are OK
- ¥ Flexibility addressed by snapshots (not dynamic scenarios, not every intermediate point) at extrema in flexibility space (which still has only 3 dimensions)
- ¥ External, primary, and secondary interfaces