

Questions related with Transnet Tender for a Scheduling System for the Coal Freight Train Operation (RFP No: 1030 72855) [part 2]

- Please clarify what you see you as the difference between daily and weekly schedules?
 The schedule that should be provided is a **weekly** schedule covering the period Monday 00:01 to Sunday 23:59 at a daily, hourly/half hourly resolution in which trains are planned, as per the attached example. The schedule must be finalised by the Thursday preceding the Monday on which it starts.

| DEPARTURE | | 00:00 | 00:30 | 01:00 | 01:30 | 02:00 | 02:30 | 02:50 | 03:00 | 03:30 | 04:00 | 04:30 |
|-------------------|-------------|--------------|-------|-------|--------------|-------|-------|---------|-------|-------|-------|--------------|
| MON 2009/02/09 | TRAIN NO. | 80098 | 80212 | | 90636 | | 91016 | Standby | | 91452 | | 31898 |
| | DESTINATION | OBK | BZR | | MED | | OUT | | | LDY | | MAF |
| | WAGON TYPE | S | S | | J | | J | | | J | | JS |
| | COMMENT | LOCO ON LOAD | LE | | | | LE | | | | | |
| TUE 2009/02/10 | TRAIN NO. | 80098 | 90210 | | 90642 | 90852 | | Standby | 91236 | 91414 | | 81804 |
| | DESTINATION | DRV | GHM | | VYF | LDY | | | MED | ATC | | WAL |
| | WAGON TYPE | S | J | | J | J | | | J | J | | S |
| | COMMENT | | | | | | | | | | | LOCO ON LOAD |
| WED 2009/02/11 | TRAIN NO. | 80098 | | 90402 | 80698 | 6108 | 91036 | Standby | 91210 | | 91648 | 91852 |
| | DESTINATION | KPL | | PSH | OBK | LE | MED | | GHM | | RSY | LDY |
| | WAGON TYPE | S | | J | S | | J | | J | | J | J |
| | COMMENT | | | | LOCO ON LOAD | SBK | | | | | | |
| THU 2009/02/12 | TRAIN NO. | 80098 | 80298 | | 90602 | 90814 | | Standby | 91242 | 6114 | | 91840 |
| | DESTINATION | VSS | DRV | | PSH | ATC | | | VYF | LE | | KOY |
| | WAGON TYPE | S | S | | J | J | | | J | | | J |
| | COMMENT | | | | | | | | | PHX | | XTRA |
| FRI 2009/02/13 | TRAIN NO. | 80098 | | 80498 | 90602 | | 81098 | Standby | | 31498 | | 91810 |
| | DESTINATION | KPL | | OBK | PSH | | VST | | | MAF | | GHM |
| | WAGON TYPE | S | | S | J | | S | | | JS | | J |

- Please clarify your definition of the Long Term Timetable and Short Term Plan? Our understanding of the documents is: you refer to a plan that gets generated, then after that you refer to a re-scheduling planning phase. Is the Short Term Plan the re-scheduling phase? Is the Short Term Plan the daily plan and the Long Term Timetable the weekly plan? Are you thinking of having a separate phase for the re-scheduling?

In order to (a) simplify the weekly planning process and (b) increase the stability of the schedule the Long Term Timetable is drawn up once for an extended period, say quarterly, for the demand that is deemed to be constant. Demand which varies from week to week will be included in the Short Term (weekly) Plan that is determined for the next week. The combination of the Long Term and the Short Term plans will be the final operational plan for the week. [Say mine x requires 4 loads per day on a constant basis and between 0 and 3 loads per week which may vary. The constant of 4

loads per day will then be scheduled for in the Long Term Timetable and the variable portion (e.g. 2 additional loads) in the Short Term Plan].

Once operations commence on Monday 00:01, the execution is monitored against the operational plan. Should deviations or incidents occur that would significantly affect the operational plan and further adherence to it, replanning will be done for the remainder of the period with a view to maximising throughput.

3. Pg 16 – Historical Volume Allocation – normally this refers to forecasting. Why is it needed if we have Mine NWB Demand?
Correct – not used. The Historical Volume Allocation is used in refining the demand of the mines using mines' shareholding and actual allocation. This function does not reside with Transnet Freight Rail any more and is excluded from The Solution
4. Do you miss out on some demand due to lack of resources (wagons, etc)?
This is possible. Transnet Freight Rail's capacity for the period being planned, is a basis of determining the demand. A strong motivation for The Solution is to improve the utilisation of resources and thus have more resources available.
5. You talk about minimizing the number of wagons or locomotives used. However, how frequently can't you meet transportation demand?
Not required for provision of The Solution.
6. Is the planning process a collaborative planning exercise, that is, does TFR use several planners that share/use/exchange plans during the planning process?
Yes. There is a Planning department who syndicate with other role players regarding aspects such as infrastructure, rolling stock, commercial, etc.
7. Do you have a particular preference for a packaged solution vs. a customised solution/developed application?
No.
8. Are you able to give us an indication of the budget that you have for this solution?
No.
9. Do you currently have an asset management solution that, amongst others, manages the locomotives, wagons, etc. and what is it? Any plans to have any changes in this space?
Yes. There is an asset management system in use. For the purpose of The Solution, the Operational Management and Information System, Sprint, will be interfaced to.
10. Are you planning to select/shortlist a few bidders and then have a second round or are you aiming to have one pass at selecting bidders?
Depending on the number of bidders, we will most likely ask each bidder to give us a detailed presentation on their proposal.
11. For the demonstrations (page 17), will you have benchmarks to test the quality and performance of the optimization engines?
We have not developed any benchmarks and are more interested in seeing functionality available vs. actual results.
12. Robust Timetable:
Further to previous question the following definition:
A robust timetable can deal as well as possible with relatively small disturbances in the real-time operations. Thus robustness of a timetable may lead to a high punctuality in the real-time operations.
Robustness of a timetable has one or more of the following effects: (i) initial disturbances can be absorbed to some extent so that they do not lead to delays, (ii) there are few knock on delays from one train to another, and (iii) delays disappear quickly, possibly with light dispatching measures. (ref Railway Timetable & Traffic published by Eurail Press.)