

BEFORE THE OFFICE OF ADMINISTRATIVE HEARINGS  
FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION  
STATE OF MINNESOTA

In the Matter of the Further Investigation in to  
Environmental and Socioeconomic Costs  
Under Minnesota Statute 216B.2422, Subdivision 3

OAH Docket No. 80-2500-31888

MPUC Docket No. E-999-CI-14-643

**ERRATA SHEET**

to

Rebuttal Testimony of and Exhibits of

**Dr. Richard S.J. Tol dated August 12, 2015**

September 10, 2015

Dr. Richard S.J. Tol provides the following corrections to his Sur-Rebuttal Report dated September 10, 2015.

Page 4:

70 The Ramsey rule relates to the reasons that receiving money today is preferred over  
71 receiving it in the future. As noted, under the Ramsey rule, the discount rate varies with  
72 economic growth. As economic growth is unlikely to be constant over long periods of time, a  
73 constant discount rate is ~~likely~~ unlikely to equal the appropriate discount rate. Similarly, the  
Ramsey  
74 rule dictates that the discount rate should differ between different scenarios of future  
75 economic growth, and between countries growing at different rates.  
76 The IWG used real discount rates of 2.5%, 3.0% and 5.0% and did not use the  
77 Ramsey rule, which had an effect on its analysis. Table 1 shows the social cost of carbon for  
78 alternative discount rates. The Office of Management and Budget recommends real rates of  
79 3.0% and 7.0%, but the IWG used 2.5%, 3.0% and 5.0%. Table 1 shows the full range. The  
80 social cost of carbon rises sharply for ~~higher~~ lower discount rates.