

S3.1.2 The Role of Filtration and Air Cleaning in Sustaining Acceptable IAQ through Ventilation Replacement

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A number of concurrent trends are converging to invigorate the interest by designers and building owners in the usage of filtration and air cleaning (FAC) as an adjunct to the environmental conditioning of commercial and institutional buildings. These trends include the recent escalations of costs of energy in all forms; the heightened awareness by tenants and occupants about acceptable indoor air quality brought on by "bad building" publicity; the aging of the inventory of commercial buildings that were constructed to prior standards with deteriorating HVAC systems; recent numerous revisions and addenda to the ventilation standards and related unification of building codes; incentives such as green building/sustainability initiatives and potential energy related tax credits; and concerns about the protection of occupants from airborne chemical or biological contamination resulting from accidental or criminal sources.

The results of a field study are presented to demonstrate to users of the ASHRAE Standard 62.1 Indoor Air Quality method that FAC treated air can meet or exceed the anticipated quality level of outdoor dilution air. These data will also a valuable information resource for standards writing bodies and code officials who are faced with the converging needs for assuring sustained or enhanced indoor environmental quality while reducing energy demand.